EFFECT OF COGNITIVE BEHAVIOUR THERAPY –INFORMED PSYCHOEDUCATION ON DEPRESSIVE SYMPTOMS, TREATMENT ADHERENCE AND HOPE AMONG DEPRESSED ADOLESCENTS ATTENDING FEDERAL NEUROPSYCHIATRIC HOSPITAL, BENIN-CITY

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DECLARATION

I hereby declare that this research project titled "Effect of cognitive behaviour therapy–informed psycho-education on depressive symptoms, treatment adherence and hope among depressed adolescents attending Federal Neuropsychiatric Hospital, Benin City" is the result of my own original work and has not been submitted either wholly or in part to any other institution for the award of another degree or diploma.

The research project is submitted in partial fulfillment of the requirements for the award of Master of Science in Child and Adolescent Mental Health of the University of Ibadan.

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CERTIFICATION

This is to certify that we reviewed this dissertation. We also supervised the project work.

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DEDICATION

To my husband, Dr.Ime John Isa and children Idara and Emem, thank you for your love, appreciation and affirmative support.

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ACRONYMS

BDI	Beck Depression Inventory
CBT	Cognitive Behaviour Therapy
DSMIV	Diagnostic and Statistical Manual of Mental disorders 4th edition
FNPH	Federal Neuropsychiatric Hospital.
ICD10	International Classification of Diseases tenth edition
SMFQ	Short Mood and Feelings Questionnaire
SSRIs	Selective Serotonin Reuptake Inhibitors
WHO	World Health Organization

ABSTRACT

Introduction

Depression is an affective disorder and the core symptoms are low mood, reduced energy and loss of interest in previously enjoyable activities. It affects between 2 and 15% of the general population and 5 to 20% of adolescents, globally. Depression often begins in the adolescence and runs a chronic course into adulthood with a resultant impairment in functioning, ranging from impairment in social role to impairment in work, home and relationships.

There is paucity of information on the effects of psychological intervention for adolescents with clinical depression in the developing world. This study investigates the effects of a psychological intervention that includes elements of Cognitive Behavioural Therapy and psycho-education on depressive symptoms, knowledge about depression, attitudes towards treatment adherence and hope among depressed adolescents.

Methodology

The study was a pre and post design without a control group, involving 18 adolescents with clinically diagnosed depressive disorder, recruited from the hospitals' medical records, who have been on antidepressants for 3 months or longer. Levels of depressive symptoms were determined at baseline and repeated at One week and Four weeks post intervention using the Beck Depression Inventory (BDI) and the Short Mood and Feelings (SMF) Questionnaire. Children's Hope Questionnaire, Knowledge of depression questionnaire and attitudes towards treatment adherence questionnaire

were also administered at baseline and repeated at One and Four weeks post intervention.

The data was cleaned and entered into SPSS version 20. Categorical variables were presented as proportions, while continuous variables were summarised using frequency tables or Means and standard Deviations. Treatment effect was analysed by comparing the differences in mean of outcomes at baseline and post intervention, using paired t tests. Level of significance was 0.05%. Pearson correlation coefficient was used to explore associations between the continuous outcome measures.

Results

The BDI and SMF scores at baseline reduced significantly (p = 0.001) from 24.4 (SD 11.8) and 13.3 (SD 4.30) to 3.94 (SD 2.10) and 2.83 (SD 1.39) respectively at One week post intervention. There was also a statistically significant increase (p = 0.001) in the mean scores on the knowledge of depression, the Children's Hope and the attitude towards treatment adherence at baseline compared with scores at One week post intervention. The differences in mean scores of all the outcome measures were sustained at Four weeks post intervention. The participants' perception of the conduct of the intervention was high.

Conclusion

This study suggest that adding psycho-education with elements of Cognitive behaviour therapy to medical treatment of depressed adolescents produces further benefits to their mental health.

Key words: Adolescents, Depression, Psycho-educational intervention and Cognitive Behavioural therapy.

CHAPTER ONE

INTRODUCTION

1.1 Background

Depression is an affective disorder and its core symptoms are persistent and pervasive low mood, a loss of interest in previously enjoyable everyday activities and reduced energy (ICD10,1992). Other symptoms include sleep disturbances, weight changes, feelings of worthlessness and hopelessness, self-harm and suicidal ideas or attempts (ICD 10,1992).

Globally, the life time prevalence of depression among the general population is between 2 and 15% (Ustun, et al, 2004). A national survey in Nigeria, showed that 3.3% of the general adult population had a depressive illness (Gureje et al, 2010). Amongst adolescents, the life time prevalence worldwide varies depending on age, and ranges between 5% in early and mid-adolescence to 20% by late adolescence (Thaper, et al, 2012). From few epidemiological surveys in South West Nigeria, the prevalence in the adolescents' population ranges between 6 to 12% (Adewuya, Ola and Aloba 2007, Adeniyi, Okafor and Adeniyi 2011, Omigbodun, et al, 2008).

Depression often begins in the adolescent period and usually runs a chronic course into adulthood (Birmaher *et al.*, 1996), with a resultant impairment in functioning. A leading consequence of depression is suicide and it is recognised globally as a major cause of death in adolescents, in addition it is revealed that about 50% of individuals in America who committed suicide had a diagnosis of depression (Simon 2003).

It is known that up to two thirds of people with depression in America do not realise that they have a treatable disorder, nor do they seek help (Andrew 2014), as a result their burden is increased. Depression occurring in adolescents has economic,

social and health implications affecting not only the individual and their family but also affects the society. Some of these implications are reduced productivity at work and school, cost of treatment, reduced involvement in social activities and associated physical co-morbidity.

1.2 Statement of the Problem

According to the American Psychiatry Association, only half of persons with depression in America receive any kind of treatment for depression, while only a fifth of these individuals eventually receive evidence based treatment (Andrew 2014). This may also be the situation in Nigeria. Therefore a huge treatment gap exists, in spite of available and effective treatment for depression. About a decade ago, the World Health Organisation (WHO) ranked depression as the third leading cause of disease burden Worldwide and in a few years, it is expected to become second only to cardiovascular disease, in disease burden. (Murray and Lopez, 1996).

As at 2014, it was estimated that Nigeria had a population of about 175 million people (National Bureau of Statistics 2014). With nearly three quarters of this population under the age of 30 and about half below the age of 15, Nigeria can thus be described as a nation of youths (Nigeria demographics profile 2013).Therefore depression occurring in this population if not effectively treated can have devastating effects (Araya *et al*., 2013) including socioeconomic consequences on the individual, the family and the country. Depression affects all age groups and the adolescent is not spared (Araya *et al*., 2013). It usually runs a chronic episode course into adulthood if untreated, leading to impairment ranging from impairment in social role, to impairment in work, home and relationships.

There is evidence that psychological intervention is effective in management of depression, anxiety and other stress related disorders (Donker *et al* 2009, Thaper *et al*, 2012, Weisz *et al*, 2006). However, despite the evidence for effectiveness of

psychological intervention in the management of depression, it is still underutilized (Takai and Chikaodiri 2015), not only in adults, but may also be the same in adolescents. Evidence from a meta-analysis of randomized controlled trials assessing the increased suicidal risk associated with the use of second generation antidepressants in adolescents (Bridge *et al* 2007), have further buttressed the need for the use of psychological intervention in this population. The poor utilization of psychological intervention in particular psycho-education was noted in a tertiary hospital in Kano Nigeria, where the majority of patients attending the clinic did not receive adequate psycho-education despite their several years of routine clinic attendance (Takai and Chikaodiri 2015).

1.3 Justification of the Study

Despite available evidence, that psychological interventions is effective non-psychological interventions in particular pharmacological therapy are still largely utilized as first line management or as the only form of treatment, not only in adults but also amongst adolescents who have depression in Nigeria. In the study site, adolescents who have depression are routinely commenced on anti-depressants, following which they receive little or no structured psychological interventions. This trend may be attributable to the lack of local evidence about its effectiveness in this setting, beliefs of patients and caregivers that drugs should always be a part of their treatment and limited resources to deliver typical psychological intervention.

In resource constrained settings, brief, simple inexpensive psychological interventions such as psychoeducation may be more practical for use (Takai and Chikaodiri 2015). Psycho-educational intervention can impact positive knowledge about a disorder, improve hope of recovery, improve compliance by reducing misconceptions and misinformation about the illness and teach people with the disorder and their families how to cope. (May and Pfafflin 2005). Thus psycho-

education may improve hope in depressed persons. It has been noted that hopelessness is a usual symptom in depression (ICD10, 1992) and a risk factor for suicide, thus improving hope would reduce depressive symptoms as well as the risk of suicide. Furthermore, brief inexpensive psycho-educational intervention especially in busy clinics can help to reduce relapses in patients with depression, anxiety and other psychological distress (Takai and Chikaodiri 2015).

There is a paucity of information on the effect of psychological interventions for adolescents with clinically diagnosed depression in the developing world. Few studies have addressed the effects of psychological interventions on adolescents in secondary schools with mild to moderate depression in developing countries like Nigeria, Chile (Bella-Awusah *et al*., 2015, Araya *et al*., 2013). Furthermore, there are only a few published studies in Nigeria or in Africa on hospital based psychological interventions for adolescents who have depression.

It is therefore important to investigate the effectiveness of psychological interventions in the management of depression in adolescents with clinical depression, particularly in resource limited settings. This study is proposed to determine the effects of psycho-educational intervention including elements of Cognitive Behaviour Therapy in addition to pharmacological treatment, on depressive symptoms, knowledge about depression, attitudes towards treatment adherence and hope on adolescents who have been diagnosed with clinical depression. If this intervention is found effective, it would help inform policy on the management of adolescents with a diagnosis of depression, in resource limited settings.

1.4 Aims and Objectives

1.4.1 Overall aim of the study

The overall aim of the study is to determine the effects of Cognitive Behaviour Therapy (CBT) including psycho-education intervention on depressive symptoms, knowledge about depression, attitudes towards treatment adherence and hope among adolescents attending the Child and Adolescent clinic of the Federal Neuropsychiatric hospital (FNPH), Benin.

1.4.2 Specific objectives

1) To evaluate the effects of CBT including psycho-education in reducing depressive symptoms among adolescents with depression.
2) To evaluate the effects of CBT including psycho-education on improving knowledge of depression among adolescents with depression.
3) To evaluate the effects of CBT including psycho-education on improving hope in adolescents with depression.
4) To evaluate the effects of CBT including psycho-education on depressed adolescents' attitude towards medication adherence.
5) To evaluate Clients' perception of the process of conduct of the intervention.

1.5 Null Hypothesis

1. There would be no significant difference in the depressive symptoms of the adolescents' pre and post intervention.
2. There would be no significant difference in the adolescents' knowledge about depression pre and post intervention.
3. There would be no significant difference in their reporting on hope pre and post intervention.
4. There would be no significant difference in their attitudes towards medication adherence pre and post intervention.

1.6 **Primary outcome indicates**

1. Reduced depressive symptoms.
2. Improved knowledge about depression.
3. Improved hope.
4. Improved attitudes towards medication adherence.
5. Clients' satisfaction with the intervention.

CHAPTER TWO

LITERATURE REVIEW

2.1 DEFINITIONS

2.1.1 Depression

Depression is an affective or mood disorder, characterized by persistent and pervasive sadness or unhappiness, loss of interest in enjoyable activities, irritability, other associated symptoms are negative thinking, reduction in energy levels, difficulty in concentrating, hopelessness, worthlessness, suicidal ideation as well as weight, appetite and sleep changes (Rey, Bella-Awusah and Ling, 2011). The Diagnostic Statistical Manual of Mental Disorders 4th Edition (2000) requires that there should be a significant distress or impaired social, occupational or other aspects of functioning in order to meet diagnostic criteria for depression. In addition the symptoms duration should be at least two weeks. The effects of substance or general medical conditions must also be ruled out.

2.2 The Public Health Burden of Depression

2.2.1 Global Burden of Depression

The World Health Organization (WHO) described depression as a mental disorder that is pervasive in the world and a major contributor to global burden of disease, affecting people in all communities, races and countries across the world (WHO 2012). It is estimated that up to 350 million people in the world are affected by this disorder (Marcus et al, 2012). Its effects on quality of life, productivity at work and cost of health services is significant (Simon, 2003), there by affecting an individual's over all functioning. The burden is even more recognized in young people as they are more likely to drop out from school, have an increased risk of unwanted pregnancies and attain lower educational levels (Kessler *et al.*, 1999), with

suicide as a worst consequence (Simon, 2003). As a result of the huge burden associated with depression the WHO have recognized it as a priority condition covered by WHO's Mental health Gap Action Programme (MH GAP). The WHO states that depression is the leading cause of disability, as measured by Years lived with Disabilities (YLDs) and the fourth leading contributor to the global burden of disease (Reddy *et al* 2010). According to Reddy *et al* (2010) by the year 2020, depression is projected to reach second place in the ranking of Disability adjusted life years (DALYs) calculated by all ages.

2.2.2 **Burden of depression in Africa and Nigeria**

There is limited literature on the burden of depression in Nigeria specifically and Africa in general. This is because of the lack of large scale national epidemiological surveys carried out in these areas. (Bella –Awusah 2013). Studies from the Southern part of Africa specifically South Africa, revealed from a world mental health survey that the life time prevalence for depression was 9.7% while the 12 month prevalence was 4.9% (Tomlinson et al 2009). A Similar survey in Nigeria revealed a life time prevalence of 3.3% and a 12 month prevalence of 1% (Gureje et al 2010).

The reported number of children who have depression globally is low (Kessler *et al* 2001) and this may be the same in Africa and Nigeria. Globally the prevalence of depression in children is less than 1% and it gradually rises to 4-5% in mid adolescence to late adolescence. (Lopez *et al*., 2006, Costello et al, 2005, Costello et al, 2006. In Nigeria, it is estimated that the prevalence rates amongst adolescents is between 6 – 12% (Adewuya, Ola and Aloba 2007, Adeniyi, Okafor and Adeniyi 2011, Omigbodun et al 2008). The above studies done in Nigeria were from small scale community studies.

2.3 Depression in Adolescents

2.3.1 Clinical Features

The clinical features and pattern of presentation of depression in adolescents may be slightly different from that in adults, with irritability standing out rather than a depressed mood as in adults. Depression in adolescents may also present with mood reactivity, hypersomnia, weight gain and symptoms may fluctuate (Rey *et al*., 2011, Thaper *et al*., 2012). Although depression exists in adolescents, it may go undiagnosed (Chinawa *et al*., 2015), and therefore lead to considerable sufferings and complications resulting in impaired psychosocial functioning. Therefore, a depressed adolescent may present with complications of depression as the first clinical presentation.

Chinawa *et al*., 2015 in their study amongst adolescents attending seconding schools in south east, Nigeria found that depression was associated with weight gain especially in those who were severely depressed. This was also found in Grossniklaus *et al*., 2010 which found that the participants in their study, who were severely depressed experienced a faster rate of increase in body mass index and waist circumference over time than those who had mild to moderate depression. Furthermore Chinawa and colleagues (2015), in their study also found a relationship between sleep hours and severity of depression. They revealed that adolescents who were severely depressed had a shorter sleep time than those who had mild to moderate depression or those who did not have depression. This is similar to Urrila *et al* (2014) in their study which noted that there was a close link between sleep disturbances and severity of depression. Thus, a reduced sleep time was experienced in adolescents who had a severe depressive disorder. It was also noted that depression was commoner amongst female adolescents particularly those whose parents were separated (Chinawa *et al*., 2015).

2.3.2 Aetiology/Pathogenesis

The Aetiology of depression in Adolescents is not attributed to a single factor, but involves many factors, including hereditary, hormonal and psychosocial factors (Thaper *et al*., 2012). However, for an adolescent to come down with the disorder may depend on the resilience factors that the individual processes. Therefore, it appears that an inter play exists between risk factors and resilience to predict the onset of a depressive disorder.

Studies have revealed that children of depressed parents are up to 3 to 4 times more likely to develop depression when compared to those whose parents do not have a depressive disorder (Rice, Harold, and Thaper 2002). It has been highlighted that this risk is not only due to genetic reasons but to other non-genetic reasons (Rice, *et al*., 2002, Tully, Iacono and McGue 2008) like environmental and socioeconomic causes.

A strong link exists between adverse childhood experiences and the development of mental disorders in particular depression as noted in Adewuya and Ologun in their study in 2006 which was in agreement with Omigbodun *et al*., in their Study in 2008. The later study found that the risk for depression was increased for youths who had suffered several traumatic events and whose trauma involved a threat which was directed to their personal integrity.

Almost 70% of adolescents with depression also had at least a co-morbid psychiatric disorder, while between 10 and 15% had at least two co-morbid disorder (Ford, Good man and Meltzer, 2003). According to Thaper *et al*., 2012, the more severe a depressive illness, the more likely the occurrence of co-morbid disorder which he explained could be due to shared risk factors as well as the co morbidity being a consequence of the depressive disorder. Therefore, depression may lead to a Co-morbid physical disorder and vice versa.

2.4. Treatment modalities of depression in adolescents and their efficacy

2.4.1 Types of treatment modalities

There are many treatment modalities for depression in adolescents, which can be grouped into pharmacological, psychological and physical. The pharmacological treatment involves the use of medications. The psychological involves structured talk therapy like psycho-education, Cognitive behaviour therapy, Interpersonal psychotherapy while the physical modal involves the use of electroconvulsive therapy, Brain stimulation therapy and vagus nerve stimulation amongst others.

2.5 Pharmacological Treatment in Management of Depression in Adolescents.

Selective Serotonin Reuptake Inhibitors have been evidenced as the drug of choice in management of depressive disorder amongst adolescents, though there is a growing concern about medication safety in this population (Weisz, Mccarty and Valeri 2006). The risk of increased suicidal ideation with its use is of concern, particularly with respect to Paroxetine (United States, Food and Drug Administration, 2005 reports).

2.6 Psychological therapy for Management of depression in adolescents and its efficacy.

2.6.1 Psychoeducation

This term was first used by Donley in 1911 in an article which he titled "Psychotherapy and re-education" however it was later introduced into medical literature 3 decades later by Tomlinson (Donker *et al*., 2009). Subsequently in the course of seeking improved and better health care for people who suffered from schizophrenia, Anderson popularized and instituted psychoeducation in its current form (Baumi *et al*., 2006). This form of education is intended to be given to people with mental health problems as well as their care givers and relatives in the course of

their treatment. (Takai and Chikaodiri 2015). This is a concept that is applied not only in mental health disorders but to chronic physical illnesses like cancer, HIV, hypertension and diabetes which are usually associated with psychostressors. According to Dixon, 1999 psycho education reflects a paradigm shift from the traditional medical model of treatment of the pathology and dysfunction to a more holistic approach with health and patients empowerment at the core of the model (Dixon, 1999).

Psychoeducation as be described a form of education offered to individuals with a mental health condition and their families to help them deal with their condition in an optimal way (Takai and Chikaodiri 2015). The social work dictionary defined psychoeducation as a process of teaching clients with mental illness and their family members about the nature of the illness, including its aetiology, progression, consequences, prognosis, treatment and alternatives (Barker 2003).The main goal is for the patient and their relatives to understand and deal better with their illness. Furthermore, the patient's strength is empowered and reinforced to contribute to their total wellbeing on a long term basis (Barker 2003). The education can be given to one person alone or given to a group of people with similar psychological distress. Psycho-education has positive therapeutic benefits however it may not be effective in acutely sick patients whose cognitive ability may be compromised. In addition the information given during psycho-education may cause more harm than good to the patient and their relatives. Therefore the patient's ability to concentrate should be considered as well as the maximum level of emotional stress that the patient and relatives can take.

2.6.2 **Advantages of psychoeducation**

First, the sessions are brief and short, so patients do not get bored and dropout rate is reduced (Takai and Chikaodiri 2015).Secondly, it is very instructive hence patients better understand their condition and how they can counsel themselves rationally therefore improving their confidence and wellbeing. Thirdly, the sessions are structured so much is accomplished therapeutically. This structured format also reduces the tendency of sessions becoming a "Chat or gist sessions". Fourthly being evidence based with clearly defined goals and techniques is a major advantage. Finally, the therapy is cross cultural and based on universal laws of human behaviour. It focuses on the client's goals and not attempting to impose the therapist's goals on the client (Semple *et al*., 2005).

2.6.3 **Effectiveness of psychoeducation**

In a meta-analysis, by Donker *et al*., 2009, the authors noted that until 2009, there was no published meta-analysis on the effectiveness of psychoeducation, in reducing symptoms of depression. In this meta -analysis of the total of 9010 abstracts identified, five papers which described four research studies targeting psychoeducation for depression and psychological distress were included in the study. The pooled standard effect size for reduced symptoms of depression and psychological distress at post intervention was d = 0.01-0.40, Z = 2.04, P= 0.05, the number needed to treat = 9). Donker and his colleagues, therefore concluded that psycho education is effective in management of depression. Furthermore, it may offer a first step intervention for those experiencing psychological distress.

A recent descriptive study, investigating clients' perspective on psychoeducation in a Nigerian tertiary hospital. The authors randomly selected 336 patients and their relatives who have been utilizing the hospitals services. The study revealed that majority of the patients did not receive enough

psychoeducationalinterventions during clinic visitations, despite its effectiveness, less complexity and being cheap (Takai and Chikaodiri 2015). Furthermore, the authors suggested that brief inexpensive psychoeducational interventions especially in busy clinics can help reduce relapses in patients who have depression, anxiety related problems and other psychological distresses.

2.6.4 **Cognitive Behaviour Therapy (CBT)**

The two most investigated psychological therapies for the management of depression are CBT and interpersonal psychotherapy (Thaper *et al*., 2012). Of these two psychological therapies, CBT is the most researched for management of depression in children and adolescents. Cognitive behaviour therapy has two components: the behavioural and cognitive. This form of therapy is based on the premise that a person's interpretation of an event causes psychological distress. (Boettcher and Piaceritini 2007). Therefore a close relationship exists between one's thoughts and feeling hence a change in our thoughts would result in a change in feeling. In Aaron's Beck's Cognitive model of depression, three important concepts were introduced which explained the psychological foundations of the disorder (Beck *et al* 1996). These concepts he called the cognitive triad of depression which includes a negative view of one's self, their world and the future. These negative thinking, Beck called cognitive errors. Fixing these errors in thinking is the main core of cognitive behaviour therapy.

Semple *et al*., 2005 described Cognitive Behaviour Therapy (CBT) as a form of psychotherapy which works to solve current problems and change unhelpful thinking and subsequently unwanted behaviour. Though originally designed to treat depression, it can be used in management of other mental disorders, as well as physical health problems. The therapist is very active in delivering CBT. The therapist aims to assist the patient to monitor cognitions, identify cognitive errors,

understand maladaptive schema and develop ways to challenge and change them (Semple *et al*., 2005). The Behavioural techniques involves Activity Scheduling, graded exposure, assignments, response prevention, distraction, relaxation training, assertiveness and social skills training. While the cognitive techniques used involves psychoeducation, reading assignments on how to cope with depression, identification of automatic thoughts, role play, thoughts diary, examine the evidence, working through the options available and thought rehearsal (Semple *et al*., 2005). A typical session of CBT is administered once or twice a week for up to 12 – 16 sessions, with each session lasting up to an hour. (Boettcher and Piecentini 2007).

2.6.5 **Effectiveness of Cognitive Behaviour Therapy**

A meta-analysis by Dobson *et al*., 1989, reviewing the effectiveness of Beck Cognitive therapy. Twenty eight studies were identified that used a common outcome measure of depression, and comparisons of cognitive therapy with other treatment modalities. The results revealed a greater degree of change for cognitive therapy compared with a waiting list or with no treatment as control, pharmacotherapy and behaviour therapy. However, its dropout rate is high because of the length of the sessions and sophistication particularly with regards to the cognitive components.

The results from a meta-analysis, by Weisz *et al*., 2006 were mixed, having moderate to high effect sizes. However, the mean of the effect sizes was approximated to 0.99. The Treatment of adolescent study (TADS) also found from large randomized studies that CBT was better than placebo in management of moderate to severe depression. In addition, it was noted that when CBT was combined with fluoxetine the benefits improved (Thaper *et al*., 2012).This finding of a better benefit with a combination of psychological and pharmacological therapy was also noted by Wiegman *et al*., 2005, in a meta-analysis, which compared the

effectiveness of combination of CBT and pharmacological therapy with CBT alone or medication alone.

2.7 Physical Therapies for management of depression in adolescents including Electroconvulsive therapy and their Effectiveness

Physical forms of therapies for management of depression include Electroconvulsive therapy (ECT), which is also called shock therapy, Brain stimulation therapy which involves activating the brain directly with electricity, migrants or implants. Other newer forms of physical therapy includes: Vagus nerve stimulation, repetitive transcranial magnetic stimulation, and magnetic seizure therapy. Of all the physical forms of therapy ECT is the most researched. ECT was first developed in 1938 by Bini and Cerreti, it has a poor reputation with many negative attitudes even amongst mental health professionals (James *et al*., 2009). According to the National institute of mental health, ECT should be considered only after an adolescent depression has not improved with other treatment options. Therefore use of ECT should be the last resort in management of depression in adolescents, except in life threatening situations, such as when a patient is suicidal, or is malnourished as a result of severe depression. One study, the consortium for Research in ECT study found an 86 percent remission rate for people who had a severe depression. The same study found it to be effective in reducing relapses with follow up ECT treatments. Despite the evidence of effectiveness, its use in adolescents poses concerns with regards to obtaining consent particularly for adolescents less than 18 years.

A systematic Review by Nadia *et al*., 2013 on the use of ECT in adolescents revealed from the 212 retrieved articles, of which 39 were included in the final sample. ECT use was found be highly effective for treating severe psychiatric disorders in adolescents. Furthermore, the procedure was associated with a few

benign adverse effects like transient memory loss. Therefore the use of ECT in adolescents should be performed in agreement with the guidelines in order to reduce the risks and achieve the desired effects.

2.8 Psychotherapy in developing countries: the problems and way forward

A meta-analysis by Vault Hof *et al*., 2011, which looked at 17 studies from developed countries. The study allowed a variety of techniques including CBT, Counselling and Behavioural therapy. It effect sizes found in this study was comparable with that of effects found in developed countries. Psychotherapy trials carried out in Pakistan, Uganda and India also revealed that training of non-health workers to carry out psychological intervention can be effective (Patel *et al*., 2011).

Two important possible problems identified in the implementation of psychological interventions in developing countries are a lack of adequately skilled human resources and cultural acceptability (Patel *et al*., 2012). However, in Patel *et al*., study in 2012, certain modifications were made to address the above identified problems. These included using of simple language, modifying stigmatizing psychiatric labels and the use of group formats. Other modifications were training of non-health workers to deliver the interventions.

CHAPTER THREE

METHODOLOGY

3.1 Study Location

This study was carried out at the Child and adolescent outpatient clinic of the Federal Neuropsychiatric Hospital Benin-City, Edo state in South- South Nigeria, from February 2016 to April 2016. The hospital was established in 1964, by the government of then Mid-western region of Nigeria, which later became Bendel state. In 1975, the Federal government took over the hospital from the then Bendel state government, which constitutes the present Edo and Delta states. The capitalof Edo, Benin consists of 4 local government areas; Oredo, Egor, Ikpoba-Okha and Ovia North-East. The hospital has two sites, located in two of these local government areas of the state, Egor and Ikpoba-Okha. This hospital offers inpatient, outpatient and community mental health services to adults, children and the elderly. It receives walk in and referred cases from Edo State and its neighbouring states like Delta, Kogi and Ondo state. Nigerian Pidgin English is commonly spoken in this region. The Child and Adolescent Unit of the hospital commenced services in September 2013. The unit has Consultant psychiatrists, resident doctors, psychiatric nurses, a clinical psychologist, an occupational therapist and social welfare officers, making up the Child and Adolescent Mental Health (CAMH) team.

All new cases present at the emergency clinic, where a resident doctor takes history and reviews with a consultant psychiatrist. Adolescents seen at the emergency who have a depressive disorder and may not require admission are commenced on anti-depressants specifically Selective serotonin reuptake inhibitors (SSRIs), there after the patient is booked to be seen by the Child and adolescent mental health

(CAMH) team on the next available clinic date. The Child and Adolescent Unit runs clinic twice a week, where an average of 25 follow up and 3 new cases are attended to on a clinic day by the residents and consultants. It is usually a busy clinic, with the other members of the CAMH team on ground delivering services. The Unit renders phone call services to patients. Patients and their care givers are called at least a day before their next scheduled visit. This approach has been effective, as up to 80% of patients and care givers called, respond and turn up for their appointments when due.

3.2 Study design

The study was an interventional study with a pre and post-test without a control group.

3.3 Study population

Adolescents attending the Child and Adolescents outpatient clinic of the FNPH, Benin made up the study participants.

3.3.1 Inclusion criteria

1. Adolescents between the ages of 13 and 18 years who gave assent and their parents gave consent for their children to participate in the study.
2. Adolescents diagnosed with a depressive disorder following psychiatric assessment and have been on antidepressant medication for 3 months or longer.
3. Adolescents who lived not more than 20km from the study site.

3.3.2 Exclusion criteria

1. Adolescents who did not give assent and their parents did not give consent for their children to participate in the study.

2. Adolescents who had Bipolar affective disorder, psychotic symptoms, or were suicidal and at risk to themselves and others and requiring admission.

3. Adolescents who lived more than 20km from the study site.

4. Adolescents who had intellectual disabilities.

3.4 Sample Size

The required sample size for the study was calculated using the formula (Wade 1997).

$n = F (\sigma/d)^2$

where,

n = minimum sample size for the group

F = 18.37 assuming 99% power and 0.05% level of significance.

d = is the difference expected to be found between the pre and post intervention level of depression. Assuming that the intervention will result in one standard deviation reduction in depressive symptoms pre and post intervention then the sample size would be 18.

With 10% attrition, the sample size would be increased to 20 to account for dropouts in the course of administering the intervention.

3.5 Study Instruments

Seven instruments were used for this study. These are a Socio-demographic questionnaire, the Beck Depression Inventory, the Short Mood and Feelings questionnaire, Knowledge of depression questionnaire, Children's Hope Scale, Attitude to medication adherence and the Clients'Satisfaction Questionnaire. All instruments except the Clients' satisfaction questionnaire were administered at base line. At one week and four weeks post intervention, all the questionnaires were again administered except the Sociodemographic and the Clients'satisfaction questionnaire.

The Clients' satisfaction questionnaire was administered immediately after the last intervention.

3.5.1 Socio-demographic Questionnaire

A Socio-demographic questionnaire modified from the School health questionnaire designed by Omigbodun and Omigbodun (2008) was used to capture the adolescents' socio-demographic information. It also included questions about their family and other school related issues(See Appendix 3).

3.5.2 The Beck Depression Inventory (BDI)

The BDI is a 21 item self-rated questionnaire which asks about symptoms of depression in the past two weeks and designed for use among individuals who are 13 years and older (Beck, Steer and Brown, 1996). Items are rated on a 4 point Likert scale ranging from 0 – 3 giving a maximum score of 63. Scores of 0 – 13 indicate minimal depression, 14 – 19 mild depression, 20 – 28 moderate depression and 29 – 63 severe depression. In the present study, we made minor modifications to aid better understanding. These changes included the simplification of terms to aid understanding of some items (for example in Item 11 in the BDI, the word angry was used instead of irritable) (See Appendix 4)

3.5.3 Short Mood and Feelings Questionnaire (SMFQ)

This is a 13-item self-rated screening questionnaire for depression in children between the ages of 8 and 18, developed for the Great Smokey Mountain Study (Angold, et al, 1995). It has been shown to be valid in several developing countries (Walker,et al, 2007, Thaber,et al 2004), as well as amongst adolescents in a study in Ibadan, Nigeria (Bella Awusah et al 2015). Statements are rated on a three point scale ranging from not true to true, with a score ranging between 0 and 3 for each respond.

The authors used a cut of score of 11 and above as indicative of depression (See Appendix 5). However, a cut off score have not been determined in our setting.

3.5.4 **Children's Hope Scale.**

It is a six questions instrument that describes how children think about themselves and how they do things in general. For each question there are 6 possible responses, on a Likert scale ranging from none of the time to all of the time. A score of 6 is given if response is all of the time and 1 given if response is none of the time. Therefore the least possible score is 6 and the maximum is 36 (Synder et al, 1997) (See Appendix 7).

3.5.5 **Attitudes towards treatment Adherence questionnaire**

This was adapted from an eleven question instrument which assesses medication adherence generally to chronic medical disorders. The responses are in a Likert Scale from strongly agree to strongly disagree, while strongly agree gets a score of 1 and strongly disagree is scored 5(Prado-Aguilar, et al 2009) (See Appendix 6). Therefore the scores range between 6 and 36. Scores of less than 12 indicates poor attitudes towards medication adherence, while scores of above 24 indicates good attitudes towards medication adherence.

3.5.6 **Clients' Satisfaction Questionnaire**

It consists of 8 questions modified from the clients' satisfaction questionnaire (Atkinson and Greenfield,2004). It is scored on a Likert scale ranging from excellent to poor, with excellent getting a score of 4 and poor gets a score of 1. It also included five open ended questions asking about likes and dislikes in the intervention sessions and on how the service could be improved upon in the future (See Appendix 9).

3.5.7 **Knowledge of depression questionnaire**

It consists of 8 questions (Hart *et al*., 2014) with a True or False or not sure response. The true response gets a score of 1, while false and not sure gets score of 0. The questions assess general knowledge on aetiology, symptoms and treatment of depression. The least possible score is 0 and the maximum is 8 (See Appendix 8).

3.6 **Ethical Considerations**

Ethical approval to carry out this study was obtained from the Ethical Review Committee of Federal Neuro-Psychiatric Hospital, Uselu, Benin City. All data collected from participants were kept confidential. After compiling a list of eligible adolescents from the medical records, those who agreed to participate in the study were assigned an ID number. A list of subject names and ID numbers was kept in a locked file cabinet and only the investigator had access to this cabinet. After the data entry was complete, the master list of names and ID numbers was destroyed. The adolescents who participated were informed of their right to withdraw from the intervention prior to or during the study. They were also informed that withdrawal from the study would not affect their treatment (see Appendix 17). The intervention did not cause any major risk of harm. Participants were given snacks and writing materials as incentives at the end of each session.

3.7 **Study procedure**

From the hospitals' Medical Records Unit, adolescents who had a diagnosis of depression made by a consultant in the previous 3 months or more were retrieved, until 25 adolescents were recruited. Phone calls were made with the assistance of the Social welfare officers to those who were eligible to participate in the study, asking for their willingness to participate in the study. Participants called who are not interested were not recruited into the study,the next eligible participant is then called.

At baseline, a socio-demographic questionnaire was used to collect demographic information. The Beck depression inventory and Short Mood and feelings questionnaire were used to determine level of depressive symptoms. Knowledge of depression questionnaire, attitude to treatment adherence questionnaire and Children's hope questionnaire were also administered at baseline. The questionnaires were interviewer administered, using the services of a trained research assistant who was blinded to the study hypotheses. The research assistant also administered the Nigerian Pidgin English version of the questionnaire to participants who did not have a good understanding of English. Nigerian pidgin English is an English- based pidgin language spoken as lingua franca across Nigeria. In the Niger-Delta region of Nigeria, it is usually spoken as a first language.

A quiet room was provided by the researcher with the kind approval of the hospitals' management for all the intervention sessions. The intervention took place weekly for four weeks and each session lasted for 30 to 40 minutes. Participants were given handouts which contained the key messages of the intervention sessions. After the 4th session, all questionnaires were re-administered except the socio-demographic questionnaire. At this time the clients' satisfaction questionnaire was administered to assess the clients' satisfaction with the intervention. Two randomly selected sessions of the intervention was audio recorded and assessed by an experienced clinician to determine if the intervention was administered consistently according to the manual. Completed attendance was judged as attending 3 or more out of 4 of the intervention sessions.

The participants and their caregivers agreed to notify the researcher if the adolescent started another form of medication or psychotherapy during the period of intervention. Expected outcome was reduced depressive symptoms, improved attitude

to treatment adherence, better knowledge about depression, improved hope about recovery and high levels of satisfaction with the intervention.

3.8 The intervention

The intervention used for this study was designed by Dr. Cornelius Ani. It draws from previous evidence based work and manuals of other CBT intervention. The main aim of the intervention is to decrease depressive symptoms, improve understanding of depression, improve attitude towards treatment adherence and improve hope. The manual was adapted to make it more useful for Nigerian adolescents. The changes are:

1. The use of a group format with the hope that it would be made more accessible to more young people in Nigeria.
2. Reduction in the number of sessions from 12 sessions in a typical CBT to 4 sessions which included 3 interventions and one revision. This would be more affordable and acceptable in low and middle income countries like Nigeria.
3. Preference for behavioural intervention over cognitive interventions as the former is found to be less complicated to explain by clinicians with limited knowledge of CBT and easier for participants to understand.
4. Simplified language understandable by adolescents in Nigeria. It was further translated to Nigerian Pidgin English which is widely spoken in the South-South region of Nigeria.
5. Inclusion of pre-existing locally appropriate religious and cultural coping mechanisms.
6. No written homework given but personal practice of post-session activities was emphasized.

3.8.1 **Intervention Sessions**

Each session lasted for 30-40 minutes with one session weekly over a four weeks period. The fourth session was a revision of the previous three sessions. The sessions took place within the hospital premises. The mode of delivery was via interactive lectures and group discussions.

The first session focused on psycho-education, because it was hoped that improving the adolescents understanding of depression, is key to demystifying the condition, depersonalizing their condition, instituting hope for recovery, and improving their attitude to treatment. This session also included a simple cognitive technique "Positive self-talk". This is less sophisticated than the typical cognitive component of CBT. (Eckers, *et al*., 2007).

The Second session involved promoting hope and medication adherence. It is known that hopelessness is a feature of depression and a risk factor to suicide. This hopelessness may result in being less likely to engage in activities to improve their depressive symptoms, including medication adherence. The topic discussed in the first session was also reviewed, using the handouts given which highlighted the key messages in each session.

The Third session focused on activity scheduling. Participants were made to understand that there was a connection between activities and their mood. It was stressed that depression can limit participation in pleasant activities. They were encouraged to involve in pleasant activities or healthy activities which could help improve their mood. The handout contained a list of healthy activities which the adolescents were encouraged to involve in and gave reports of their experiences in the next session.The participants were also encouraged to list some activities which they liked and could engage in.

The final session was a review of the previous sessions, using the handouts and placing emphasis on the key messages in each session. The participants also gave reports of their experiences since the sessions began. It was noted that all participants reported that they were compliant to their medications throughout the period of the intervention sessions.

3.9 Participants recruitment for the intervention.

A total of 25 adolescents from the medical records were eligible for this study, however, 5 did not met the inclusion criteria because 4 of them lived more than 20km from the study site, and the parent of one adolescent did not give consent for his child to participant in the study. Therefore, 20 adolescents met the inclusion criteria, however 2 of them did not turn up for the interventions. At baseline, 18 adolescents commenced the intervention sessions. The sessions took place in two separate groups. A total of 16 adolescents attended all four 4 sessions, while 2 attended 3 sessions. All 18 adolescents were available at post intervention (see Fig 1).

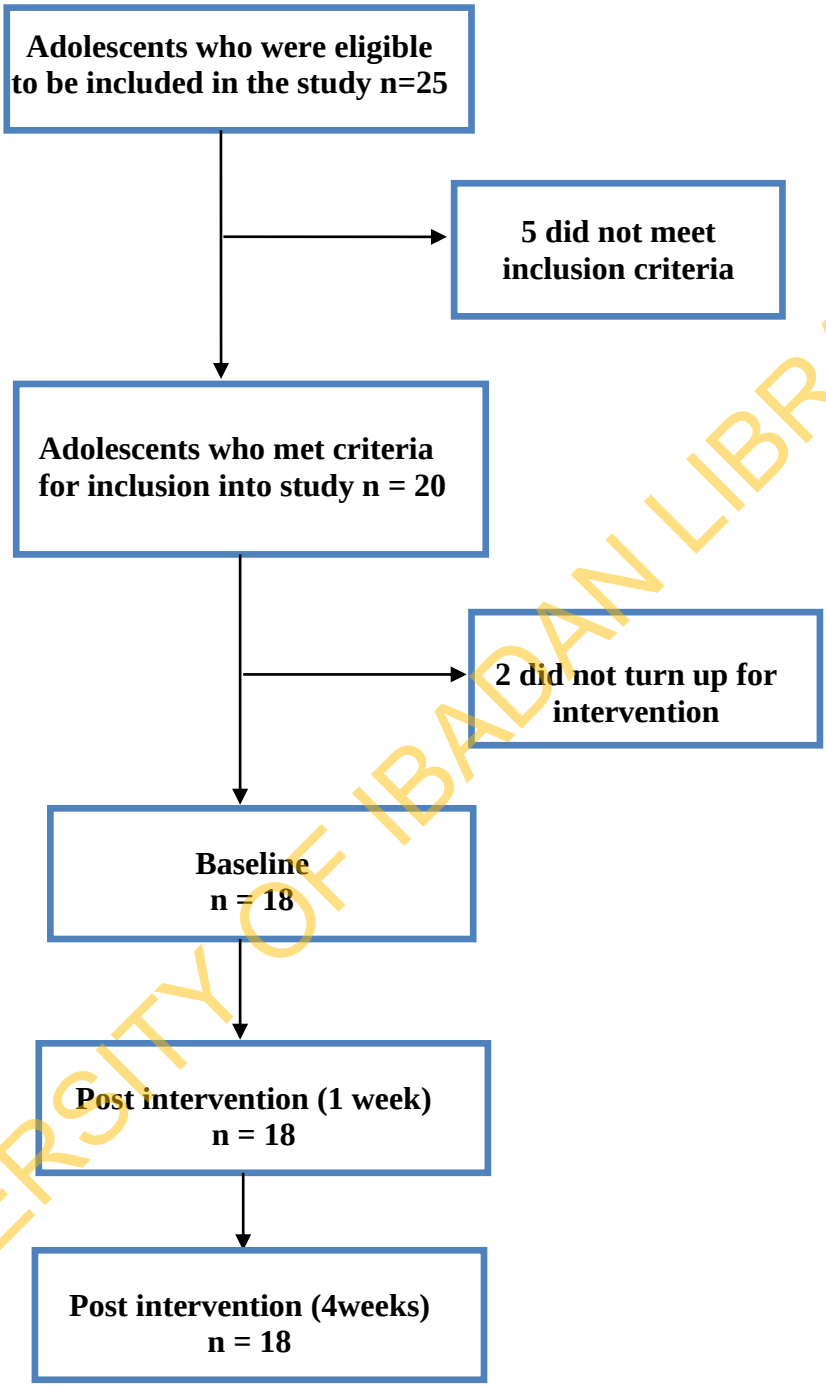

Fig.1: Flow chart showing participants' recruitment for the study.

3.9 Translation into Local Language

The questionnaires were translated into Nigerian Pidgin English (See Appendix 10-16), which is commonly spoken in Edo state and its neighbouring states. The translation was done using the iterative back translation procedure. This process was conducted by competent linguists at the University of Benin.

3.10 Validity and Reliability of Instruments

The English version of the BDI (Adewuya *et al*., 2007) and SMFQ (Bella Awusah *et al*., 2015) have been validated and used among Nigerian secondary school students. The Pigdin English versions of all the instruments were critically examined for content validity by two independent Consultant psychiatrists after back translation by a competent linguist. The Clients' satisfaction questionnaire have been validated in Nigeria and used by Bella-Awusah *et al*., 2015. The attitude to treatment questionnaire has acceptable reliability of Cronbach alpha,0.640. Pilot testing of the instruments used was carried out amongst 3 independent adolescents in the study environment to assess understanding of the instruments. In the pilot study, which was self-administered, the participants did not complete the questionnaire, hence the researcher employed the services a trained research assistant to administer the questionnaires to the participants for the study.

3.11 Data Analysis

The data was cleaned and entered into SPSS version 20.Categorical variables were presented as proportions, while continuous variables were summarized using frequency tables or Means and Standard Deviations. Treatment effect was analysed by comparing the differences in mean of outcomes at baseline and post intervention, using paired t-tests at 0.05% level of significance. Pearson correlation coefficient was used to explore associations between the continuous outcome measures.

CHAPTER FOUR

RESULTS

The chapter is divided into four sections. In section one, the socio-demographic characteristics of the participants is presented. Section two compares the baseline scores with outcome measure at one week post intervention. Section three compares outcome measures at one week and four weeks. Section four describes the participants' perception of the conduct of the treatment programme and their suggestions for improvement

4.1. Socio-demographic characteristics of the study participants

The 18 adolescents who participated in the study were 9 females (50%) and 9 males (50%), giving a male to female ratio of 1:1. The study was gender-balanced, having equal males and females. The age range of the participants was 13 – 18 years, with a mean of 15.5years (SD 1.54).Majority (77.8%) of the participants were in secondary school, with most in the senior secondary school classes. There was only one (5.6%) in primary school and one in the foundation class of the University. Ten of the participants lived in Central and southern area of the city, with two living outside these areas.

All the participants practiced a religion with majority (over 90%) practicing Christianity and there was only one (5.6%) practicing Muslim. Over eleven (60%) affirmed that their religion guides their behaviour very much with only one saying his religion did not guide his behaviour. Majority, eleven (61.1%) were from monogamous homes while 38.9% were from polygamous homes. The parents of thirteen (72.2%) of the participants were married and most of the participants studied were currently living with their parents. Most of the participants were brought up by their parents from childhood, while about a third was bought up by other relatives.

The participants who worked after school to earn money were four (22.2%), which included petty trading and part-time teaching.

A total of seventeen participants (94.4%) said that they liked to go to school and majority of them felt they did well in school. Half of the participants nine (50%) had a guidance counsellor in their school and majority of the participants, thirteen (72.2%) would visit the guidance counsellor for academic related problems (Table 4.1).

Table 4.1a Frequency distribution of the demographic characteristics of respondents

Variable	n=18	%
Gender		
Male	9	50.0
Female	9	50.0
Class		
Primary 5	1	5.6
Junior Secondary	3	27.7
Senior Secondary School	11	61.1
Post-Secondary School/Pre university	2	11.1
University	1	5.6
Area where participants' live		
Benin Central	14	77.8
Benin South	2	11.1
Benin North	2	11.1
Age group (years)		
13 – 16	7	38.8
16 – 18	11	61.1
Mean age (Standard deviation)	15.5 (1.54)	
Participants place of worship		
Pentecostal Church	11	61.1
Orthodox Church	5	27.8
Mosque	1	5.6
Kingdom Hall of Jehovah Witness	1	5.6
Degree to which teaching of participants' religion guide their behavior		
Very much	11	61.1
Much	6	33.3
Not much	1	5.6
Marital Status of Parents		
Married	13	72.2
Separated/divorced	1	5.6
Father is dead	2	11.1
Mother is dead	2	11.1

Who participants' presently lives with		
Parents	13	72.2
Mother	2	11.1
Father	2	11.1
Grandparents	1	5.6
Brought up by		
Parents	13	72.2
Mother	2	11.1
Grandparents	3	16.7
Participants' who feel they are doing well in school		
Yes	17	94.4
No	1	5.6
Participants' who have a guidance counsellor in their school		
Yes	9	50.0
No	9	50.0
Participants' who have visited the guidance counsellor in their school		
Yes	11	61.1
No	7	38.9
Reasons why participants' visits guidance counsellor in their school		
When I am insulted	2	11.1
To give me an advice	6	33.3
For educational purposes	10	55.6

Table 4.1b Frequency distribution of the demographic characteristics of respondents

Variable	n=18	%
Type of Family		
Monogamous	11	61.1
Polygamous	7	38.9
Marital Status of Parents		
Married	13	72.2
Separated/divorced	1	5.6
Father is dead	2	11.1
Mother is dead	2	11.1
Level of father's education		
No formal education	2	11.1
Primary school	2	11.1
Secondary school	5	27.8
Post-secondary	2	11.1
University degree and above	5	27.8
Do not know	2	11.1
Mother's level of Education		
No formal education	2	11.1
Primary school	3	16.7
Secondary school	7	38.9
University degree and above	6	33.3

4.2 Comparison of mean scores at baseline and out measures at 1 week post intervention

The mean BDI score at baseline was 24.4 (SD 11.18) and at one week post intervention was 3.94 (SD 2.10) with a mean difference of 21.78. There was statistically significant difference (p = 0.001) in the mean score at baseline and 1 week post intervention (see Table 4.2).

The knowledge of depression had a mean score at baseline of 2.89 (SD 1.41) and at one week post intervention was 5.83 (SD 1.04) with a mean difference of –2.94. There was statistically significant difference (p = 0.001) in the mean score at baseline and one week post intervention (see table 4.2).

The Children's Hope score at baseline was 17.44 (SD 2.33) and at one week post intervention was 29.79 (SD 2.56) with a mean difference of –12.33. There was statistically significant difference (p = 0.001) in the mean score at baseline and one week post intervention (see Table 4.2).

The attitude to medication adherence mean score at baseline was 27.94 (SD 5.66) and at one week post intervention was 46.28 (SD 3.26) with a mean difference of –18.33. There was statistically significant difference (p = 0.001) in the mean score at baseline and one week post intervention (see Table 4.2).

The Short Mood and Feelings mean score at baseline was 13.33 (SD 4.30) and at one week post intervention was 2.83 (SD 1.39) with a mean difference of 10.5. There was statistically significant difference (p = 0.001) in the mean score at baseline and one week post intervention (see Table 4.2).

Table 4.1: Comparison of mean scores at baseline and outcome measures at 1 Week post intervention

Variable	Baseline (Mean/SD)	1 Week post test (Mean/SD)	t	df	p value	Mean diff.
Beck Depression inventory (BDI)	24.44(11.18)	3.94(2.10)	7.800	17	0.001	21.78
Knowledge of depression	2.89(1.41)	5.83(1.04)	-7.86	17	0.001	-2.94
Children's hope	17.44(2.33)	29.78(2.56)	-15.74	17	0.001	-12.33
Attitude to medication adherence	27.94(5.66)	46.28(3.26)	-11.20	17	0.001	-18.33
Short Mood & Feelings	13.33(4.30)	2.83(1.38)	8.692	17	0.001	10.5

Significant at $p < 0.05$

4.3 Comparison of the mean scores of outcome measures at One Week post test and Four Weeks post test

The mean BDI score was 4.11 (SD 2.22) at one week post intervention and 3.78 (SD 1.31) at four weeks post intervention while the mean difference was 0.33. The mean difference was not statistically significant (p = 0.58) (see Table 4.3).

At one week post intervention on the adolescents' knowledge of depression, the mean score was 5.83 (SD 1.04) while at 4 weeks post intervention, the mean score was 4.28 (SD 1.67) with a mean difference of 1.56. The difference was statistically significant (p=0.001) (see Table 4.3).

The mean score on the Children's hope scale at one week post intervention was 29.78 (SD 2.56), while at four weeks post intervention, the mean score was 30.72 (SD 0.83) with a mean difference of 0.94. The mean difference was not statistically significant (p=0.01) (see Table 4.3).

The attitudes towards treatment adherence mean score at one week and four weeks was 46.28(SD 3.26) and 46.33(SD 3.60) respectively. The mean difference of -0.056 was not statistically significant (p=0.1) (see Table 4.3).

The short mood and feelings mean score was 13.33 (SD 4.30) at one week post intervention while at four weeks post intervention it was 2.22 (SD 1.17) with a mean difference of l1.11. This was statistically significant (p = 0.001) (see Table 4.3).

Table 4.2: Comparison of the mean scores of outcome measures at One Week post test and Four Weeks post test

Variable	1 Week post test (Mean/SD)	4 Weeks post test (Mean/SD)	T	df	p value	Mean diff.
Beck Depression inventory(BDI)	4.11(2.22)	3.78(1.31)	0.57	17	0.58	0.33
Knowledge of depression	5.83(1.04)	4.28(1.67)	4.51	17	0.001	1.56
Children's Hope	29.782(2.56)	30.72(0.83)	-1.752	17	0.098	0.94
Attitude to Medication Adherence	46.28(3.26)	46.33(3.60)	0.131	17	0.897	-0.056
Short Mood & Feelings (SMFQ)	13.33	2.22(1.17)	9.58	17	0.001	11.11

Significant at $p < 0.05$

4.4 Level of perception of the conduct of the Intervention

Half of the participants, 9 (50%) rated the intervention programme as good, while a little below half, 8 (44.4%) rated it as excellent. Only one person rated the programme as fair. Majority of the participants' (94.6%) agreed they got the help they wanted from the intervention. Majority of the participants (72%) affirmed that the programme met all their needs. The number of participants who would recommend the programme to a friend with similar problems was about 70%. Almost 80% of the participants believed the programme helped them alot. Only three persons (16.7%) were dissatisfied with the programme. The Clients' satisfaction mean score was 28.7(SD1.57) with actual scores of between 27 and 31. The maximum obtainable score on the Clients' satisfaction is 32 (see Table 4.4).

Table 4.4 Level of perception of the conduct of the intervention (n=18)

	Frequency	Percentage (%)
How would you rate the programme?		
Fair	1	5.6
Good	9	50.0
Excellent	8	44.4
Did you get the kind of help you wanted?		
Not really	1	5.6
Yes generally	4	22.2
Yes definitely	13	72.2
To what extent did the programme meet your needs?		
Met most of my needs	5	27.8
Met almost all my needs	13	72.2
If a friend had similar problems, would you recommend the programme to him/her?		
No, probably not	3	16.7
Yes Probably	3	16.7
Yes definitely	12	66.7
How satisfied are you with the help you received?		
Quite dissatisfied	3	16.7
Mostly satisfied	6	33.3
Very satisfied	9	50.0

4.4.1 Qualitative assessment of the intervention programme.

Five (5) qualitative questions were included to assess the participant's perception of the level of the intervention. These included what information they liked best, what they did not like about the programme,

i. What participants liked best about the programme

Participants reported that they liked the way the topics were taught particularly the use of simple English and when they did not understand it was further simplified to Pidgin English. They liked the interactions they had with other members of the group. They also liked the refreshment and gifts given to them.

ii. What participants did not like about the programme

Most participants did not have any issues they disliked about the programme. However, one participant reported that he did not like the fact that most people came late for the session, "I have to wait for the late comers". Another participant would have preferred the sessions to continue a little longer.

iii. Participants best topics

Knowledge about depression, positive self-talk, activity scheduling and improving hope were all reported as being among the participants best topics (See Table 4.6).

iv. Topics they did not like

None of the participants had a topic they did not like.

v. Participants' suggestions for improvement of the programme

Of the eighteen participants, seven (38.9%) gave suggestions for improvement. Their suggestions included meetings outside the hospital, in places like

the churches, mosque or school. One participant suggested that the sessions could be done on phone through WhatsApp call or other social media (see Table 4.7).

Table 4.5: Emerging themes from process of conduct of the intervention

Themes	N	%
Emerging themes from process of conduct of the intervention – Delivery of sessions "The organizer used very simple English, so we understand very well" "The programme was not boring because they also used Pidgin English to explain better" "They gave us handouts about the session"	8	44.4
Length of time "Each of the session was not too long, so I was not tired" "The session was short, so we were not bored"	7	38.9
Refreshments "I liked the biscuits and coke given to us every time we came" "The snacks given to us was very rich and satisfying"	6	33.3

Total is above 100% because of multiple response from participants

Table 4.6: Emerging themes from responses to participants' best topics

Themes	N	%
Knowledge of depression "I learnt depression is a real illness and not that I am faking to be weak" "Depression affects 1 in 20 young people"	10	55.5
Positive self-talk "What I say to myself can affect the way I feel" "I would say positive things to myself every time I feel sad'	5	27.8
Activity scheduling "I now know many healthy activities, I can do for free"	5	27.8
Improving hope "I learnt ways to maintain and improve my hope"	8	44.4

Total is above 100% because of multiple response from participants

Table 4.7: Participants' suggestions for improvement of the programme

Themes	N	%
Meeting outside the hospital	6	33.3
Sessions done through the social media	1	5.6
Participants who did not make any suggestion	11	61.1
Total	18	100.0

CHAPTER FIVE

DISCUSSION, STRENGTHS, LIMITATIONAND RECOMMENDATIONS

5.1 Discussion

This study examined the effects of adding psycho-educational intervention (that includes elements of Cognitive Behaviour Therapy) on depressive symptoms, knowledge about depression and hope for depressed adolescents who were already on antidepressants. The participants' satisfaction with the intervention was also obtained. The study used a one group pre and post design with no control group. Levels of depressive symptoms were determined at baseline and repeated at 1 week and 4 weeks post intervention using the Beck Depression-Inventory (BDI) and the Short Mood and Feelings Questionnaire (SMFQ). Children's Hope questionnaire, Knowledge of Depression Questionnaire and Attitudes Towards Treatment Adherence Questionnaire were also administered at baseline line and repeated at one week and 4 weeks post intervention. Client's satisfaction questionnaire was administered after the 4th intervention.

The socio-demographic characteristics of the participants in this study are similar to the socio-demographic characteristics of school adolescents in South East Nigeria (Chinawa et al, 2015) and in South West Nigeria. (Adewuya et al 2007, Omigbodun et al, 2008, Bella – Awusah et al 2015). Majority of the participants were Christians, their parents were currently married, and from monogamous family settings. It is typical in families in this sub – region of Nigeria to be predominantly Christians and to have a monogamous family setting (NPC, 2008).

Majority (72.2%) of the participants studied were currently living with their parents while about a third of them lived with other relatives. Similarly, in the study

of Bella- Awusah et al (2015), up to a third of the study participants were not currently living with their parents. The practice where children live with other extended members of their family is culturally accepted in this part of the world. About a fifth of the participants had lost one of their parents. Only one of the participant stated that their parents were divorced or separated. This is in agreement with the study in South Eastern Nigeria (Chinawa et al 2015), which found that less than 5% of the adolescents' studied had parents who were separated or divorced.

Majority of the parents of the adolescents studied had at least a secondary school education and above. This may have accounted for the high educational attainment of some of the participants in this study as 3 of the participants in this study were already out of secondary school, and either in the foundation class of the University or preparing to enter the University at the age of 16 years. Most of the adolescents (77.8%) were in secondary school. The study participants were predominantly in the senior secondary school and only one was in primary school. This is not surprising as the prevalence of depression increases gradually from mid adolescence to late adolescence (Thaper, Collishaw, Pine and Thaper 2012), which in Nigerian adolescents would be in secondary school.

The intervention in this study resulted in a significant reduction in symptoms of depression as observed on both the BDI and SMFQ. At baseline the mean BDI score of 24.44(SD 11.18) reduced to 3.94(SD 2.10) and 3.78(SD 1.31) at one week and four weeks post intervention respectively. The SMFQ decreased from 13.33(SD 4.30) to 2.83(SD 1.38) and to 2.22(SD1.17) at 1 week and 4 weeks post intervention respectively. Both reductions were statistically significant with p value =0.001.

On the participants Knowledge of Depression Questionnaire (KODQ), the base line score of 2.89(SD 1.41) increased significantly to 5.83 (SD 1.04) P= 0.001 at one week post intervention. The KODQ score at four weeks was still statistically

higher than at base line indicating that the improved knowledge was maintained in the short term. The low baseline levels of knowledge about depression found in this study was not surprising because the knowledge about mental illness and in particular depression is low, even amongst people who are expected to have good knowledge. While there are limited studies about knowledge of depression amongst adolescents in Nigeria, a cross-sectional survey amongst secondary school students in south-west Nigeria by Dogra and colleagues (2011), revealed that lack of knowledge about mental illness exist amongst this population. Dogra et al's study (2011) also revealed that the majority believed mental illness was due to a spiritual attack. Similarly low knowledge about mental illness in general and depression in particular have been described amongst teachers (Aghukwa 2009,Adejumo2014). An unpublished study by Adejumo et al (2014) in South-west Nigeria, disclosed that teachers explained the symptoms of depression as normal adolescent behavior. A similar view was expressed amongst teachers in Australia, who experienced difficulties distinguishing depressive symptoms from normal behaviour in adolescents (Trudge and Lawn 2011). These low levels in knowledge may be because of lack of structured and organized information network for mental health. Most information adolescents obtain about mental health in Nigeria is usually informal from the media and not screened by relevant authorities.

The mean score on the Children's Hope Questionnaire at baseline of 17.44 (SD 2.33) increased significantly to 29.78 (SD 2.56) p=0.0001 at 1 week post intervention. This improved hope was sustained at 4 weeks post intervention with a mean score of 30.72(SD 0.83).Although, there are limited studies of hope-focused interventions for depressed adolescents, studies amongst adolescent cancer patients show that hope focused intervention can improve hope and result in improvement of the depressed(Shin and Park 2007). Furthermore, hope-focused intervention can

reduce suicide ideation in depressed patients (Han et al,2010). This is important particularly in the adolescents where the rate of suicide is high.

A meta-analysis by Weiz and Speridakos (2011) revealed that hope enhancement strategies alone were not associated with overall reduction in depression, anxiety or psychological distress. However that same meta-analysis revealed that more traditional, behaviour based interventions such as included in the current study are associated with moderate to large increase in well being. This buttress the evidence of traditional behaviour-based interventions particularly in resource constrained settings. Therefore it is expected as seen in this study, to find significant improvements in the levels of hope in the adolescent following intervention.

The adolescents' attitude towards medication adherence showed a statistically significant improvement from baseline score of 27.94 (SD 5.66) to (46.28 (3.26) at one week post intervention. Their attitude towards medication adherence remained higher than base line at four weeks post intervention. There exist a poor attitude towards medication adherence amongst the general population generally to chronic medical illness and depression is not an exception (WHO 2003). A wide range of barriers to adherence have been reported which includes health system, provider and patient factors. The symptoms of depression like hopelessness, reduced energy, amotivation and cognitive impairment have been identified as risk factors to poor medication adherence in patients who have depression. Therefore finding a baseline poor attitude towards medication adherence in this study is not unusual.

This study found that the adolescents' degree of satisfaction with the process of conduct of the intervention was high, based on both qualitative and quantitative measures. The mean score of 28.67(SD 1.57) from the clients satisfaction

questionnaire with actual scores between 27 and 31, where the maximum obtainable score is 32, indicated that the intervention was well received by the adolescents. This issimilar to another Nigerian study by Bella- Awusah et al(2015) which had mean score of 30, where maximum obtainable score is 32.The finding that the adolescents' liked the intervention was not surprising as there is usually not much offered in terms of psychological support but they would have preferred non- hospital settings.

The four qualitative questions asked to access perception of the process of conduct of the intervention, showed that all the participants liked all the topics covered. This is similar to findings in Bella – Awusah et al's (2015) study. The adolescents also commented that the use of simple English as well as Pidgin English made the intervention interesting and reduced boredom. Most of the adolescents commented that they were happy that the session did not last too long. This may have accounted for a low dropout rate from the sessions. This low dropout rate when sessions are brief was also reported in Takai and Chikaodiri's study (2015). It may appear that the participants looked forward to each session knowing that it was not going to last too long. Their concern for time may have been because at the time of the study most of participants were either writing exams or they were about to.

On suggestions to improve the programme, six adolescents suggested sessions to be done outside the hospital, like in Churches, schools or even in recreation clubs. The adolescents probably thought coming to hospital should be strictly for very ill people or may have found it somewhat stigmatizing. This is unlike Bella – Awusah's (2015) study where the students felt the school was not an appropriate place to receive mental health services. They believed the school should be strictly for educational purposes and some suggested the hospital might be better. In the latter case, the students probably thought they would be stigmatized by their school peers hence their

negative response. The suggestion by one adolescent in this study,that the intervention could be done via Social media may reduce the perceived stigma noted in the study by Bella – Awusah et al (2015). The suggestions by adolescents in the current study that churches should be a good venue for similar intervention is consistent with their report that most of them practiced a form of religion, which influences their behaviour.

Though the intervention in the study was found to improve the outcome measures, it was not without challenges. The researcher initially intended for the sessions to be done during the follow up clinic visits. However, this was not possible for all the adolescents because the study was done when students were either preparing or writing examinations. Secondly, the busy clinic of the study site made intervention in the clinics inconvenient. Therefore, the researcher made adaptations of dividing the group into two for the intervention sessions. The intervention took place within the hospital premises but outside clinic hours. In spite of the above adaptation which allowed participants come at their convenient time; some adolescents came late for the sessions and a few did not attend all the four sessions.

Another adaptation which has previously been used in other studies (Patel et al 2011,) was to present the programme as an informative and psycho-educational activity which aimed to help participants get more information about their illness and ways to cope. The adolescents therefore did not see the programme as a therapy session for mental illness, thus it was more acceptable. These adaptations have been reported by Bella-Awusah et al(2015), Patel et al(2011) and yielded good results. These adaptations should be considered in planning such interventions so that acceptability and accessibility is ensured. Reaching out to these adolescents in their natural environment should be considered paramount. Therefore use of peers, teachers, religious leaders led interventions should be considered. The report by the

participants in this study that they would visit the school counsellor if they had academic problems and social issues like bullying, suggest that school counsellors can be trained to give psychological intervention. Patel et al (2007), have identified that trained lay workers could bridge the treatment gap that exist and scale up mental health services.

The findings that all the adolescents studied practiced a religion made the cognitive element of the programme easy to explain using familiar religious concept of positive confession or positive self talk. The researcher encouraged the use of religious strategies to help the adolescents cope and improve their hope.A list of healthy activities which the adolescents could do was written on the hand out given during the sessions. The participants were also encouraged to suggest activities which they liked and could engage in, which was added to the list. This was observed to be well received as it made them aware of a lot of activities that they could do which cost nothing.

Furthermore, to make the intervention more acceptable the research assistant explained sessions in Pidgin English for easy understanding. The researcher also used a mixture of English and Pidgin English when necessary. The handouts given during the sessions which the participants took home to help remind them of the key messages for each session was helpful. No written assignments were given except for practice of positive self talk and scheduling of activities, which participants found interesting. Use of phone calls, whatsapp messages to remind participants of their next intervention session may have also resulted in the low dropout rate noted during the intervention.

5.2 Strengths

1 A major strength of this study is the low dropout rate from the intervention sessions and post intervention. This may be because of the brief and short sessions as well as the use of phone calls as reminders. The Researcher with the assistance of the research assistant was able to locate all participants at 4 weeks post intervention.

2 The questionnaires used were interviewer administered, which helped to reduce missing data.

3 The use of a mixed-qualitative and quantitative approach to assess clients' satisfaction allowed the adolescents to express themselves better instead of responding in predetermined options.

5.3 Limitation

1. A major limitation of the study was that the adolescents were diagnosed with depression based on clinical interview by a consultant psychiatrist rather than structured diagnostic interview. However the clinical diagnosis was in keeping with ICD 10 Diagnostic criteria.
2. The small sample size in this study may limit generalisation of the results.
3. This study was an interventional study without a control group, this means that factors other than the intervention may potentially account for some of the improvement noted. Such alternative factors include delayed benefit from antidepressants and socially desirable responding, or regression to the mean.

5.4 Recommendations

The recommendations from this study are as follows

1. It is important that further studies explore the efficacy of this intervention in a controlled trial.
2. Future studies need to examine the feasibility of allied Child and adolescent mental health professionals like Nurses, Social welfare officers' occupational therapist facilitating the interventions. Feasibility of peers-led interventions should also be examined.
3. Findings from this study should be used to inform policies on the management of depressed adolescents, in resource limited settings like the study location by adding psychological support to medical intervention.
4. Researchers should be encouraged to study the effectiveness of psychological intervention via the social media like whatsapp, facebook, twitter, skypee, instagram.

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APPENDIX 1

INFORMED CONSENT FORM (PARENTS/GUARDIAN)

Title of Research: Effects of a cognitive behaviour therapy informed psycho-education intervention on depressive symptoms, treatment adherence and hope amongst depressed adolescents attending the child and adolescent unit of the Federal Neuropsychiatric Hospital, Benin – City.

The study is conducted by Dr.Ehimwenma. W. Isa, a Masters student of the centre for Child and Adolescent Mental Health, University of Ibadan Nigeria. The purpose of the research is to determine the effects of a CBT informed psycho-education intervention on depressive symptoms, knowledge about depression and hope amongst adolescents who have depression attending the Child and Adolescent Clinic of the Federal Neuropsychiatric Hospital, Benin (FNPH).

The study would be carried out in two stages, in the first stage your child or ward will be asked to fill a questionnaire. The questionnaire would ask questions about the child's knowledge about depression and the symptoms of stress and depression the child experiences. The stage two would involve an intervention, where your child would be taught ways to cope with the stressors and other experiences they have. This programme would take place in a group form, with other adolescents experiencing similar issues. The child does not have to answer any questions if they feels the questions invades on their privacy or make them uncomfortable. The goals of this study would be to reduce depressive symptoms, improve adherence to treatment and improve your child's reporting on hope of recovery. We hope the intervention would achieve the above, although we are not certain.

All information collected in this study will be given code members and no name would be recorded, so it cannot be linked to your child or wards. Further more their names would not be used in any publications or reports.

Some of the sessions would be audio recorded but this would be used solely for the purposes of the study. Your child's participation is voluntary. If they do not participate it would have no effect on them, family and the treatment they receive in this hospital.

There would be light refreshments provided during the sessions and when the child fills the questionnaires. However money or gifts would not be given to the child for taking part in the research. The intervention would take place in 4 weeks, with one session of about 1 hour per week. In the last stage, after the intervention the child would fill another questionnaire.

Consent statement

If you have fully understood the study, and would be willing that your child/ward participate in the study. Please kindly sign in the space provided.

Sign/thumb print …….. Date ……

Name ……..

APPENDIX 2

INFORMED CONSENT FORM FOR ADOLESCENTS

Title of Research: Effects of a cognitive behaviour therapy psycho-education intervention on depressive symptoms, treatment adherence and hope amongst depressed adolescents attending the child and adolescent unit of the Federal Neuropsychiatric Hospital, Benin – City.

The study is conducted by Dr.Ehimwenma. W. Isa, a Masters student of the centre for Child and Adolescent Mental Health, University of Ibadan Nigeria. The purpose of the research is to determine the effects of a CBT informed psycho-education intervention on depressive symptoms, knowledge about depression and hope amongst adolescents who have depression attending the Child and Adolescent Clinic of the Federal Neuropsychiatries Hospital, Benin (FNPH).

The study would be carried out in two stages, in the first stage you will be asked to fill a questionnaire. The questionnaire would ask questions about your knowledge about depression and the symptoms of stress and depression you experience. The stage two would involve an intervention, where you would be taught ways to cope with the stressors and other experiences you have. This programme would take place in a group form, with other adolescents experiencing similar issues. You do not have to answer any question if you feel the questions invades on your privacy or make you uncomfortable. The goals of this study would be to reduce depressive symptoms, improve adherence to treatment and improve your hope. We hope the intervention would achieve the above, although we are not certain.

All information collected in this study will be given code members and no name would be recorded, so it cannot be linked to you. Furthermore your names would not be used in any publications or reports.

Some of the sessions would be audio recorded but this would be used solely for the purposes of the study. Your participation is voluntary. If you do not participate it would have no effect on them, family and the treatment they receive in this hospital.

There would be light refreshments provided during the sessions and when the child fills the questionnaires. However money or gifts would not be given to the child for taking part in the research. The intervention would take place in 4 weeks, with one session of about 1 hour per week. In the last stage, after intervention you would fill another questionnaire.

Consent/ assent statement

If you have fully understood the study, and would be willing to participate in the study. Please kindly sign in the space provided.

Sign/thumb print …….. Date ……

Name ……..

APPENDIX 3

"EFFECT OF A COGNITIVE BEHAVIOUR THERAPY –INFORMED PSYCHOEDUCATION INTERVENTION ON DEPRESSIVE SYMPTOMS, TREATMENT ADHERENCE AND HOPE AMONG DEPRESSED ADOLESCENTS ATTENDING FEDERAL NEUROPSYCHIATRIC HOSPITAL, BENIN"

SOCIO-DEMOGRAPHIC QUESTIONAIRE

Please write the answers to the questions or draw a circle where it applies to you and your health.

SECTION I

1. Name of school?
2. Class?
3. Where do you live?
4. What is your date of birth?
5. How old are you?
6. Are you a boy or girl?
7. Do you practice any religion?
8. Please write the exact place you worship?
9. How much does the teaching of your religion guide your behaviour?

FAMILY INFORMATION

10. Family type (a) monogamous (b) polygamous
11. Number of mother's children?
12. Number of father's children?
13. What is your position among your father's children?
14. What is your position among your mother's children?
15. Marital status of parents? (a) Married (b) Separated/divorced (c) father is dead (d) mother is dead (e) father and mother are dead
16. Who do you live with presently? (a) Parents (b) Mother (c) Father (d) Grandparents (e) Grandmother (f) Grandfather (g) others (specify please)
17. Who bought you up from your childhood? (a) Parents (b) Mother (c) Father (d) Grandparents (e) Grandmother

18. Do you do any kind of work to earn money before or after school ?Yes or No
19. If yes please specify
20. Level of father's education (a) No formal education (b) Primary school (c) Secondary school (d) Post secondary (d) University degree and above (e) Do not know
21. Father's occupation ,please specify----------
22. Level of mother's education (a) no formal education (b) Primary school (c) Secondary school (d) Post secondary (e) University degree and above
23. Mother's occupation, please specify _____

SCHOOL RELATED QUESTIONS

24. Do you like to go to school? Yes/No
25. Do you do well in your school ?Yes/No
26. How many children in your class?
27. Do you have a guidance counselor in your school.? Yes/No
28. Have you ever go to see them?
29. If yes, what did you go to see them for?
30. If you have a problem at school, would you go to the guidance counselor for help? Yes or No. If yes, why would you go?If no why would you not go?

APPENDIX 4

BECK DEPRESSION INVENTORY

Please tick or circle the statement that applies to you in the past 2 weeks (please choose only one answer per question)

(1)	0	I do not feel sad
	1	I feel sad
	2	I am sad all the time and I can't get out of it.
	3	I am so sad and unhappy that I can't take it anymore
(2)	0	I am not particularly discouraged about the future
	1	I feel discouraged about the future
	2	I feel I have nothing to look forward to.
	3	I feel the future is hopeless and that things cannot improve.
(3)	0	I do not feel like a failure.
	1	I feel I have failed more than the average person.
	2	As I look back on my life, all I can see is a lot of failures.
	3	I feel I am a complete failure as a person.
(4)	0	I get as much satisfaction out of things as I used to.
	1	I don't enjoy things the way I used to.
	2	I don't get real satisfaction out of anything anymore.
	3.	I am dissatisfied or bored with everything.
(5)	0	I don't feel particularly guilty.
	1	I feel guilty a good part of the time.
	2	I feel quite guilty most of the time.

	3	I feel guilty all of the time.
(6)	0	I don't feel I am being punished.
	1	I feel I may be punished.
	2	I expect to be punished
	3	I feel I am being punished
(7)	0	I don't feel disappointed in myself.
	1	I am disappointed in myself.
	2	I am disgusted with myself.
	3	I hate myself.
(8)	0	I don't feel I am any worse than anybody else.
	1	I am critical of myself for my weaknesses or mistakes.
	2	I blame myself all the time for my faults.
	3	I blame myself for everything bad that happens.
(9)	0	I don't have any thoughts of killing myself.
	1	I have thoughts of killing myself, but I would not carry them out.
	2	I would like to kill myself.
	3	I would kill myself if I had the chance.
(10)	0	I don't cry any more than usual.
	1	I cry more now than I used to.
	2	I cry all the time now.
	3	I used to be able to cry, but now I can't cry even though I want to.
(11)	0	I am no more irritated/annoyed by things than I used to be.
	1	I am slightly more annoyed by things now than before.
	2	I am quite annoyed or irritated a good part of the time.

	3	I feel annoyed all the time.
(12)	0	I have not lost interest in other people.
	1	I am less interested in other people than I used to be.
	2	I have lost most of my interest in other people.
	3	I have lost all of my interest in other people.
(13)	0	I make decisions about as well as I ever could
	1	I put off making decisions more than I used to.
	2	I have greater difficulty in making decisions more than I used to.
	3	I can't make decisions at all anymore.
(14)	0	I don't feel that I look any worse than I used to.
	1	I am worried that I am looking old or ugly.
	2	I feel there are permanent changes in my appearance that make me look ugly.
	3	I believe that I look ugly.
(15)	0	I can do my work about as well as before.
	1	it takes an extra effort to get started at doing something.
	2	I have to push myself very hard to do anything.
	3	I can't do any work at all.
(16)	0	I can sleep as well as usual
	1	I don't sleep as well as I used to.
	2	I wake up 1-2 hours earlier than usual and find it hard to get back to sleep.
	3	I wake up several hours earlier than I used to and cannot get backt sleep.
(17)	0	I don't get more tired than usual.
	1	I get tired more easily than I used to.
	2	I get tired from doing almost anything.

	3	I am too tired to do anything.
(18)	0	My appetite is the same as usual.
	1	My appetite is not as good as it used to be.
	2	My appetite is much worse now.
	3	I have no appetite at all anymore.
(19)	0	I haven't lost much weight, lately.
	1	I have lost more than 2 kg or a little weight.
	2	I have lost more than 4kg or some weight.
	3	I have lost more than 6kg or a lot of weight.
(20)	0	I am no more worried about my health than usual.
	1	I am worried about physical problems like aches, pains, upset stomach, or constipation.
	2	I am very worried about physical problems and it's hard to think of much else.
	3	I am so worried about my physical problems that I cannot think of anything else.
(21)	0	I have not noticed any recent change in my interest in the opposite sex.
	1	I am less interested in the opposite sex than I used to be.
	2	I have almost no interest in the opposite sex.
	3	I have lost interest in the opposite sex completely.

APPENDIX 5

MOODS AND FEELINGS QUESTIONNAIRE (7-18)

This form is about how you might have been feeling or acted recently.

Please tick (√)how much you have felt or acted this way in the past two weeks

0 = Not true 1= Sometimes true 2= True

s/n	Items	**0**	**1**	**2**
1.	I felt miserable or unhappy			
2.	I didn't enjoy anything at all			
3.	I felt so tired I just sat around and did nothing.			
4.	I was very restless			
5.	I felt I was no good anymore.			
6.	I cried a lot.			
7.	I found it hard to think properly or concentrate.			
8.	I hated myself			
9.	I felt I was a bad person			
10.	I felt lonely			
11.	I thought nobody really likes me			
12.	I thought I would never be as good as other children			
13.	I did everything wrong.			

Score:_____

APPENDIX 6

ATTITUDE TOWARDS TREATMENT ADHERENCE QUESTIONNAIRE

We wish to know to what extent you agree or disagree with the situation that helps or limits patients with their ability to follow the recommended by their doctor

s/n	Items	Strongly agree	Agree	Neither agree or disagree	Disagree	Strongly disagree	Score
1	If depressed patients feel well, they should stop taking their medications.	1	2	3	4	5	
2	Depressed patients will not become more unwell if they stop taking their medications	1	2	3	4	5	
3	In depressed patients their medications will cause more problems than it solves	1	2	3	4	5	
4	Depression is not a mental health problem complications	1	2	3	4	5	
5	Medications are not helpful for making depression better	1	2	3	4	5	
6	For depressed patients is difficult to take their medications	1	2	3	4	5	
7	Family members do not need to encourage their relatives to take their medications	1	2	3	4	5	
8	Depressed patients have problems complying with their treatment if they don't live with their parents	1	2	3	4	5	

9	Depressed patients have problems complying with their treatment due to lack of money	1	2	3	4	5	
10	Depressed patients do not usually need to follow the doctors prescription	1	2	3	4	5	
11	Do you agree with your depression treatment?	1	2	3	4	5	
	TOTAL SCORE						

APPENDIX 7

THE CHILDRENS HOPE SCALE (QUESTIONS ABOUT YOUR GOALS)

For the following questions, please tick the box with the most suitable answer that best describes you.

1. I think I am doing very well.

None of the time	A little of the time	Some of the time	A lot of the time	Most of the time	All of the time
◯	◯	◯	◯	◯	◯

2. I can think of ways to get the things in life that are most important to me

None of the time	A little of the time	Some of the time	A lot of the time	Most of the time	All of the time
◯	◯	◯	◯	◯	◯

3. I am doing just as well as other children my age.

None of the time	A little of the time	Some of the time	A lot of the time	Most of the time	All of the time
◯	◯	◯	◯	◯	◯

4. When I have a problem, I can come up with a lot of ways to solve it.

None of the time	A little of the time	Some of the time	A lot of the time	Most of the time	All of the time
◯	◯	◯	◯	◯	◯

5. I think the things I have done in the past will help me in the future.

◯	◯	◯	◯	◯	◯
None of the time	A little of the time	Some of the time	A lot of the time	Most of the time	All of the time

6. Even when others want to quit, I know that I can find ways to solve the problem.

◯	◯	◯	◯	◯	◯
None of the time	A little of the time	Some of the time	A lot of the time	Most of the time	All of the time

APPENDIX 8

KNOWLEDGE QUESTIONNAIRE

(1) Depression can be caused by stress.

(a) True [ ] Not sure [ ] False [ ]

(2) Depression usually affects about one in 10 young people.

(a) True [ ] Not sure [ ] False [ ]

(3) No treatment can make depression better. So the affected person has to just cope with it

(a) True [ ] Not sure [ ] False [ ]

(4) When a person becomes depressed they may stop doing enjoyable activities

(a) True [ ] Not sure [ ] False [ ]

(5) Doing enjoyable activities can affect how we feel in our mood

(a) True [ ] Not sure [ ] False [ ]

(6) What we say to ourselves can affect how we feel in our mood.

(a) True [ ] Not sure [ ] False [ ]

(7) Deep slow breathing can help us feel relaxed.

(a) True [ ] Not sure [ ] False [ ]

(8) Positive imagination involves thinking of the happiest event of our life or imagining what would be the happiest event of our life.

(a) True [ ] Not sure [ ] False [ ]

APPENDIX 9

CLIENT SATISFACTION QUESTIONNAIRE

(1) How would you rate the programme?

_____4_____3_____2_____1

Excellent Good Fair Poor

(2) Did you get the kind of help you wanted?

_____1 _____2 _____3 _____4_____

Not at all Not really Yes generally Yes definitely

(3) To what extent did the programme meet your needs?

_____4 _____3_____2_____1

M*et al*most all my needs Met most of my needs Met only a few Met none of my needs

(4) If a friend had similar problems, would you recommend the programme to him/her?

_____1 _____2 _____ 3_____ 4_____

Definitely not No, probably not Yes Probably Yes definitely

(5) How satisfied are you with the help you received

_____1 _____2 _____ 3_____ 4_____

Very dissatisfied quite dissatisfied Mostly satisfied Very satisfied

(6) Has the programme helped you to cope better with your problems?

_____4 _____3_____2_____1_____

Yes a lot Yes a little No it didn't really help No things even got worse

(7) Overall, how satisfied are you with the programme

_____4 _____3_____2_____1_____

Very satisfied Mostly satisfied Not very satisfied Very dissatisfied

(8) If you were to need help again, would you come back to the programme?

_____1 _____2 _____ 3_____ 4_____

No definitely not No probably not Yes probably Yes definitely

What I liked best about the programme is

_____

What I didn't like about the programme is

_____

_____

The topic(s) that I liked best are

_____

The topic(s) that I didn't really like are

_____

My suggestions to improve the programme are:

_____

_____

APPENDIX 10

SOCIO-DEMOGRAPHIC QUESTIONNAIRE (PIDGIN ENGLISH)

Please write the answers to the questions or draw a circle where it applies to you and your health.

SECTION I

30. Wetin be the name of your school?
31. Which class you dey now?
32. Where you dey stay?
33. Which date dem born you?
34. How many years you dey now?
35. Na boy you be or girl?
36. Which religion you dey?
37. Abeg tell me where you day serve God?
38. How far the tins wey your religion dey teach take dey guide how you dey behave?

FAMILY INFORMATION

39. How many wives your papa be marry? a) one wife b) many wives
40. How many pikin your mama born?
41. How many pikin your papa born?
42. Which number you be for your papa pikindem?
43. Which number you be for your mama pikindem?
44. Your papa and mama how demdey live now? a) Still dey marry b) Don separate c) Papa don die d) Mama don die c) Papa and mama dem don die
45. Who you dey stay with now? a) My papa and mama b) Only my papa c) Only my mama d) My grandmama e) My gandpapa d) if na another person, name am _____
46. Who train you from small pikin come reach as you dey so?
    (a) Na my papa and mama (b) Na my papa only (c) Na my mama only
    (d) Na my grand papa and mama (e) Na my grand mama.
47. You dey do any work to get money before you go school or wen you dey come back from school? Yes or No

48. If you dey do any work to get money before you go school or come back from school, den tell us the type of work wey you dey do?_____

49. Where your papa go school reach?

(a) Na modern school e go? (b) He finish secondary school? (c) Na university he go? (d) Nor know whether e go school at all?

50. Which work your papa dey do now? _____

51. Where your mama go school reach?

(a) E no go school at all? (b) He finish primary school (c) He finish secondary school? (d) Na university he go? (e) Nor know whether e go school at al?

23. Which work your mama dey do now?_____

SCHOOL RELATED QUESTIONS

24. You go like make you go school? Yes/No
25. You dey do well or dey try for school? Yes/No
26. How many pikindey your class?
27. Una get people wey they always advise and talk to una for school? Yes/No
28. You don ever try go see dem?
29. If ever say you don go see them, wetin make you go see them?
30. If you get any problem for school, you dey go see them to help you? Yes or No.
31. If yes say you don see dem, wetin make you go see them or if you never go see them, wetin make you nor go see dem?

APPENDIX 11

BECK DEPRESSION INVENTORY (PIDGIN ENLISH)

Please select the one wey concern you in the past 2 weeks (select only one answer for one question)

(1)	0	I dey happy
	1	I nor dey happy
	2	I nor dey happy all de time and I nor fit comot am
	3	I nor dey happy so tay I nor fit bear am again.
(2)	0	I feel say tins go better for future
	1	I feel say tins no go better for future
	2	I feel say I nor get any tin to expect for de future
	3	I feel say no hope at all for the future and tins no go better again.
(3)	0	I nor believe say I be fail fail.
	1	I think say I don fail pass some other people them.
	2	Wen I look back to my life for back,wetin I dey see na many fail fail.
	3	I think say I be complete failure for life or I no go ever make am for life.
(4)	0	I dey enjoy every tin I dey do as I dey enjoy am before.
	1	I nor dey enjoy tins as he suppose to be.
	2	I nor dey get enjoyment from de tins I dey do at all again.
	3.	I nor dey enjoy any tin at all from wetin I dey do again.
(5)	0	I nor dey feel like say I dey wrong
	1	I dey feel like say I dey wrong some time.
	2	I dey feel say I dey wrong almost every time.
	3	I dey feel say I dey wrong all the time.
(6)	0	I nor believe say demdey punish me
	1	I feel say dem go punish me.
	2	I feel say dem won punish me
	3	I feel say demdey punish me
(7)	0	I nor feel i say i don fall my hand.
	1	I dey feel like say i don fall my hand.
	2	I feel say i don fall my hand well well.
	3	I don fall my hand kpatakpata he con make me no like myself.

(8)	0	I nor feel say na my own worse pass other people own.
	1	I dey serious for my weakness and mistakes.
	2	I dey blame myself all the time for all my faults.
	3	I dey blame myself for everything bad wey happen.
(9)	0	I nor get plan for mind to kill myself.
	1	I dey think of killing myself but I nor go do am.
	2	I go like to kill myself.
	3	I go kill myself if I get the chance.
(10)	0	I nor dey cry pass as before.
	1	I dey cry now pass as I dey cry before.
	2	I dey cry every time now.
	3	I be dey cry well before but I nor fit cry now even though I want to cry
(11)	0	I nor dey vex for wetindey vex me before.
	1	Small tins now dey vex me pass before
	2	Na many times I dey vex now.
	3	I dey vex all the time.
(12)	0	I never loss interest for other people.
	1	I no get interest for people the way I first take get for dem
	2	I don lost most of my interest for other people.
	3	I don lost all the interest wey I get for other people.
(13)	0	Na me dey decide wetin I won do as I fit do am
	1	I nor dey decide quick as I dey decide for matter as before.
	2	I dey find am difficult to decide wetin I won do now.
	3	I nor fit decide wetin I won do again.
(14)	0	I nor feel say I look bad than I first be.
	1	I dey worry say I look old, and I nor fine again.
	2	I feel say some tin don change for my face/person when dey make me look ugly.
	3	I feel say I look ugly now.
(15)	0	I fit dey do my work dey go, as I fit dey do before.
	1	You go put more power for wetin you dey do.

2 I dey force myself to do wetin I wan do.

3 I nor dey fit do any tin again.

(16) 0 I dey fit sleep well as before

1 I nor dey fit sleep, as I first dey sleep before.

2 I dey wake up like 1-2 times for night, and I nor dey fit sleep again.

3 I dey wake up too early than the normal time wen I surpose wake from sleep and I nor fit sleep again.

(17) 0 I nor dey get tire pass as before

1 I dey quick tire for wetin I dey do dan before.

2 I dey get tire for anything wen I dey do

3 I dey too tire for anything wen I dey do..

(18) 0 Wetin be dey make me dey eat food, still be as before.

1 Wetin be dey make me eat food nor good again as before.

2 Wetin be dey make me eat food nordey at all at all.

3 I nor dey fit eat again at all.

(19) 0 I never too lost weight now.

1 I don lost small weight wey fit reach 2kg.

2 I don lost weight wen fit pass 4kg.

3 I don lost weight wen fit pass 6kg or the won wen pass am well well.

(20) 0 I nor dey worry about my health pass before

1 I dey worry about health problems wen I dey see like wen body dey pain person, wen belle dey worry person etc.

2 I dey worry well well for health problems and I dey find am hard to think of some other tins.

3 I dey worry about problem wen I dey see and he nor dey make me think of another tin again.

(21) 0 The thing weydey make girl lor woman dey like to meet with man I never see any change for am for my body.

1 The thing weydey make girl or woman to like to met with man he don comot for my body small

2 The thing weydeymake girl dey like to met with man he don comot for my body well well.

3 The thing weydeymake woman or girIdey like to met man he don comot for my body kpatakpata.

APPENDIX 12

MOODS AND FEELINGS QUESTIONNAIRE (7-18) (PIDGIN ENGLISH)

This form is about how you might have been feeling or acted recently.

Please tick (√) how much you have felt or acted this way in the past two weeks

0 = No be truth 1= Sometime na truth 2= Na truth

		0	**1**	**2**
1.	Inside my mind no de sweet me			
2.	I nor dey enjoy any tin at all again			
3.	I feel tire so tay I go just sit down, I nor no wetin I go do again.			
4.	Busy body go dey do me, so I no fit dey fit settle down or sit down one place.			
5.	I feel say I nor dey useful to people again..			
6.	I dey cry well well			
7.	I dey find am difficult to think well or serious for work			
8.	I nor like myself			
9.	I feel say I be wicked person			
10.	I feel I day on my own			
11.	I think say no body like me			
12.	I think say I nor go be good pikin as other pikindem be			
13.	I dey do every tin wrong			

APPENDIX 13

ATTITUDE TOWARDS TREATMENT ADHERENCE QUESTIONNAIRE (PIDGIN ENGLISH)

For each of the following questions, please we wish to know to which extent

We wish to know to what extent you agree or disagree with the situation that helps or limits patients with their ability to follow the recommended by their doctor

s/n	Items	You Support am well well	You support am	You nor support am and nor agree	You nor support am	You nor support am at all	Score
1	If person wen nor first well come later well, he good make he stop to dey take him medicine	1	2	3	4	5	
2	Person wen nor first well go come worst, if he nor dey take him medicine again	1	2	3	4	5	
3	Person wen nor well their medicine dey cause serious problem for demabi he surpose cure dem	1	2	3	4	5	
4	Person wen nor dey fine or know wetin he dey do na disease wen fit cause kolo for am	1	2	3	4	5	
5	The medicine wen dem take dey treat person wen nor well fit reduce the problem of the person	1	2	3	4	5	
6	Hedey hard for person wen nor well to take him medicine abi?	1	2	3	4	5	
7	We dey advice/encourage people wen nor well family make dem try to make sure say their person take drugs	1	2	3	4	5	
8	Person wen nor well nor dey like to take their medicine wen dem nor	1	2	3	4	5	

	dey stay with their family						
9	Person wen nor well dey get problem to dey buy their medicine because dem nor get money	1	2	3	4	5	
10	Person wen nor welsurpose to dey take their medicine wen dem agree wit doctor say dem go dey take	1	2	3	4	5	
11	You support the medicine wen doctor dey use take dey treat you?	1	2	3	4	5	
	TOTAL SCORE						

APPENDIX 14

THE CHILDREN'S HOPE SCALE (PIDGIN ENGLISH)

For the following questions, please tick the box with the most suitable answer that best describes you.

1. I feel say I dey do well

◯	◯	◯	◯	◯	◯
No time I feel say I dey do well	Na small time I feel say I take do well	Na some time I feel say I dey do well	Many time I feel say I dey do well	Some time I feel say I dey do well	All de time I feel say I dey do well

2. I deysome times think of how I go take get tins wey important for me for life

◯	◯	◯	◯	◯	◯
No time I think of am at all	Na small time I take think of am	Na some time I take think of am	Many times I dey think of am	Some time I dey think of am	All de time I dey think of am

3. I dey do well well as order pikindey do

◯	◯	◯	◯	◯	◯

No time I take dey do well as order pikindem	Na small time I take dey do well as order pikindem	Na some time I dey do well as order pikindem	Many time I dey do well as order pikindem	Some time I dey do well as order pikindem	All de time I dey do well as order pikindem

4. Wen problem or wahala come I get different ways to solve de problems

◯	◯	◯	◯	◯	◯
No time I take dey get way to solve problem	Na small time I get way to solve problem	Na some time I get way to solve problem	Many time I get way to solve problem	Some time I get way to solve problem	Na all de time I get way to solve problem

5. I believe say wetin don do for past go help me for the future wen dey come

◯	◯	◯	◯	◯	◯
No time I believe say wetin I do for past go take help me for future	Na small time I believe say wetin I do for past go take help me for future	Na some time believe say wetin I do for past go take help me for future	Many time I believe say wetin I do for past go take help me for future	Some time I believe say wetin I do for past go take help me for future	All de time I believe say wetin I do for past go take help me for future

6. Even if people won run from the wahala, I get way wen I go fit take solve de problem

.

◯	◯	◯	◯	◯	◯
No time I take get way to solve problem even if other people dey run from de same problem	Na small time I get way to solve problem even if other people dey run from de same problem	Na some time I get way to solve problem even if other people dey run from de same problem	Many time I get way to solve problem even if other people dey run from de same problem	Some time I get way to solve problem even if other people dey run from de same problem	All de time get way to solve problem even if other people dey run from de same problem

APPENDIX 15

KNOWLEDGE QUESTIONNAIRE (PIDGIN ENGLISH)

(1) Wen person dey work, he nor dey rest, he dey think many many tins, he fit come make person begin behave like person wen won "Kolo".

(a) Na truth [ ] Nor sure [ ] Na lie [ ]

(2) Person wen nordey rest and wen dey too think many many tins wen fit come lead to person wen won Kolo. If you count 10 people, you go see one inside.

(a) Na truth [ ] Nor sure [ ] Na lie [ ]

(3) No matter de medicine wen dey give person wen don dey get the sign for body, de medicine nor go fit make am well again. So the person wen get am for body go try make him or her manage him self.

(a) Na truth [ ] Nor sure [ ] Na lie [ ]

(4) The person wen nor dey do well again, wen don dey behave some how nor dey fit enjoy tins wen people dey enjoy?

(a) Na truth [ ] Nor sure [ ] Na lie [ ]

(5) Person wen dey enjoy tins wen he dey do, the tins fit affect the way wen he dey live him life.

(a) Na truth [ ] Nor sure [ ] Na lie [ ]

(6) Wetin we tell ourselves fit get way wen he go take worry our body/selves.

(a) Na truth [ ] Nor sure [ ] Na lie [ ]

(7) Far-ffar and small breathing wen we dey breath go fit make us feel relaxed or get rest.

(a) Na truth [ ] Nor sure [ ] Na lie [ ]

(8) Wen you dey think better better tins, he dey make you feel happy well well for your life or he fit make you feel happy for your life

(a) Na truth [ ] Nor sure [ ] Na lie [ ]

APPENDIX 16

CLIENT SATISFACTION QUESTIONNAIRE (PIDGIN ENGLISH)

(1) How you see wetin we dey do?

_____4_____3_____2_____1_____

He dey very good He good You fit manage amHe nor good well well at all

(2) Na wetin you dey expect from us na you get?

_____1 _____2 _____3 _____4_____

You nor get any tin someat all at all | You nor too get any tin | You get every tin well well | You get inside

(3) Like how you feel say wetin we dey do don take help you?

_____4 _____3_____2_____1_____

He don almost help me | He don solve some me well well | He help me solve of my problem | He nor help me solve some of my problem solve any of my problem | solve problem problem at all

(4) If you get friend wen get the same problem, you to gree advice am make he do de same tine wey you do?

_____1_____2 _____ 3_____ 4_____

I nor go adviceI nor go advice am am at all | I fit advice amI go always advice am

(5) How you take dey satisfy with wetin we don dey tell you?

_____1 _____2 _____ 3_____ 4_____

I nor dey satisfy wellwell | I nor too dey satisfy | Some time I dey satisfy | I dey satisfy well well

(6) Dis our programme and discussion, he don help you to manage wit your problem?

_____4 _____3_____2_____1_____

Yes well well me at all | Yes small small | No he nor help even bad | Na now tins come well well

(7) For everytin so far, how you don take dey satisfy?

_____4 _____3_____2_____1_____

I dey satisfy wellwell | I dey satisfy | I nor too dey satisfy | I nor dey satisfy at all

(8) If for example you come need help again, you go still gree come back again?

_____1 _____2 _____ 3_____ 4_____

No I nor go come again at all | I fit nor come back again | Yes I fit come back | Yes I go always come back for help

(9) Wetin you like pass for the programme wen you don dey do since?

_____

(10) Wetin you nor like for the programme

_____

_____

(10) For de tin wen we dey talk since, which won you come like pass?

_____

(11) For de tin wen we dey talk since, which one you nor like at all, at all?

_____

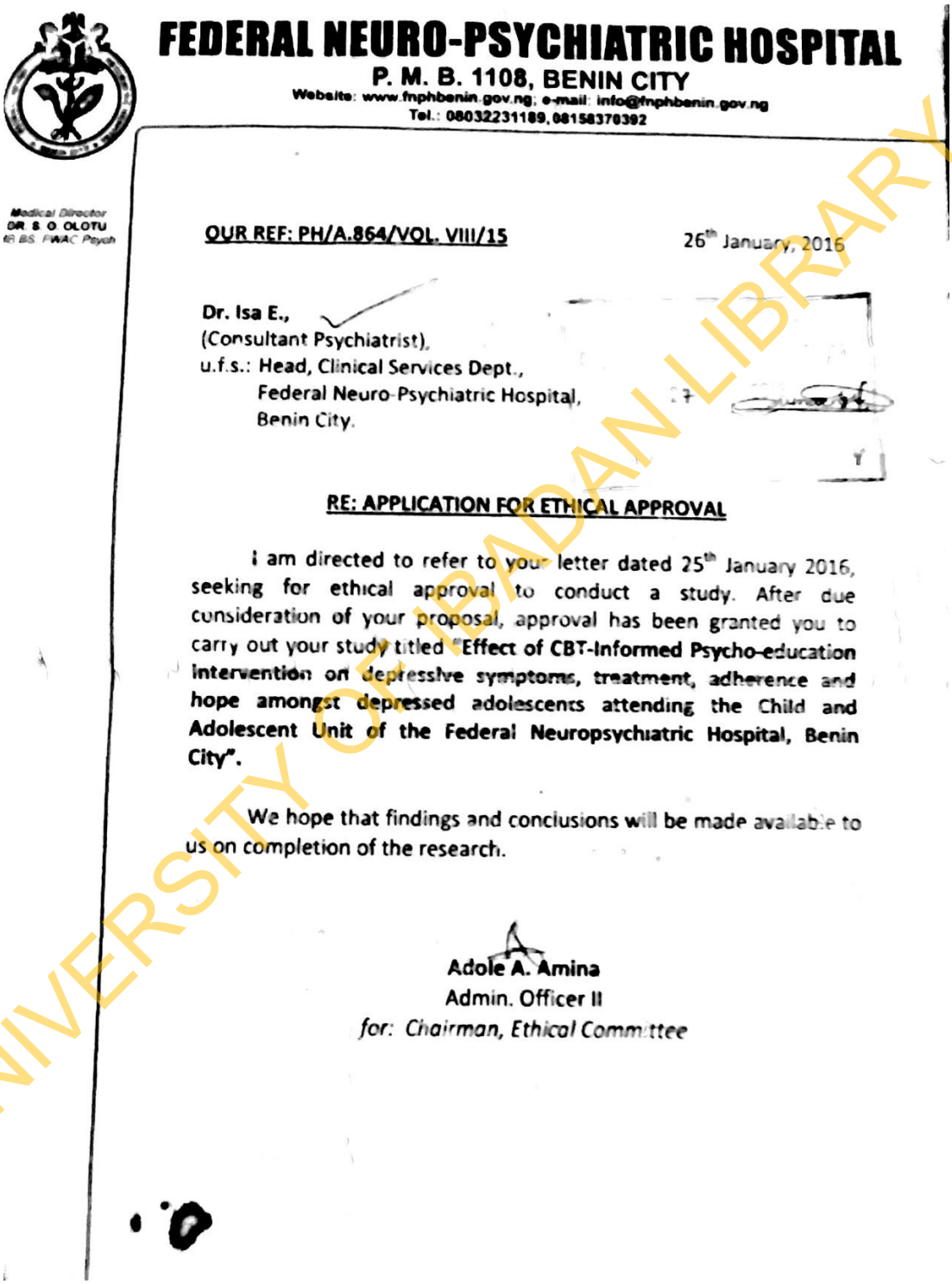
(12) Wetin u tink say we fit do make the programme go take work and better well well.

_____

`

APPENDIX 17

ETHICAL APPROVAL



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Medical Director
DR. S. O. OLOTU
MB.BS. FWACP Psych

OUR REF: PH/A.864/VOL. VIII/15 26th January, 2016

Dr. Isa E.,
(Consultant Psychiatrist),
u.f.s.: Head, Clinical Services Dept.,
Federal Neuro-Psychiatric Hospital,
Benin City.

RE: APPLICATION FOR ETHICAL APPROVAL

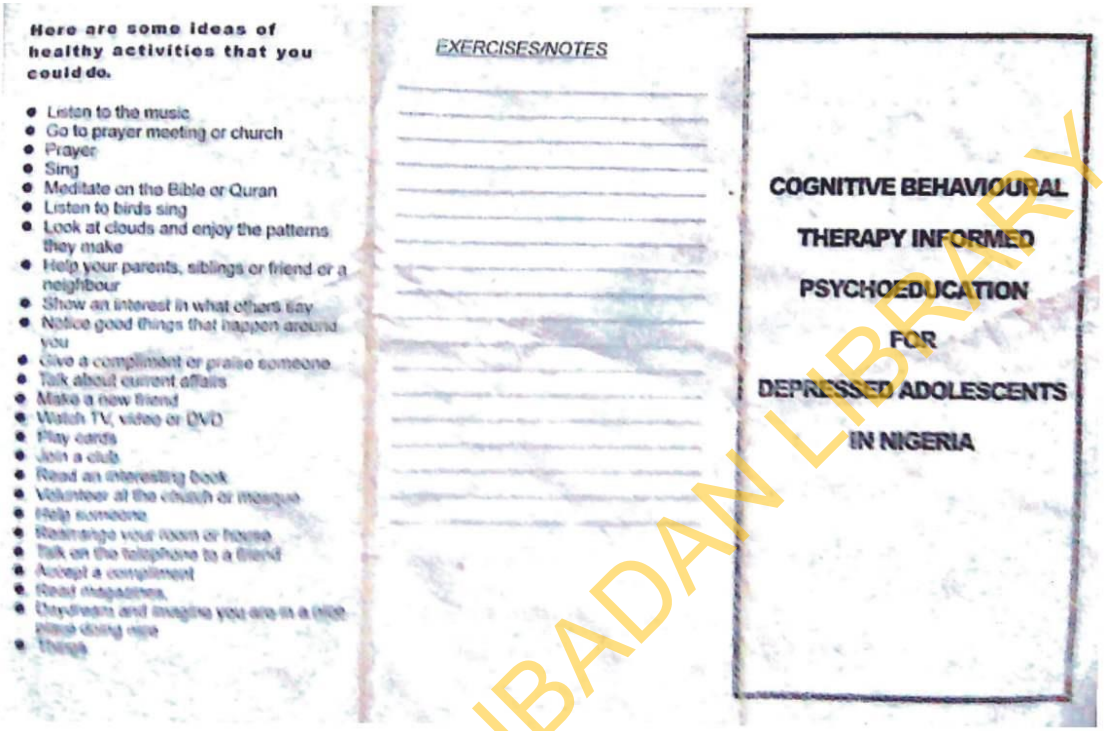
I am directed to refer to your letter dated 25th January 2016, seeking for ethical approval to conduct a study. After due consideration of your proposal, approval has been granted you to carry out your study titled **"Effect of CBT-Informed Psycho-education intervention on depressive symptoms, treatment, adherence and hope amongst depressed adolescents attending the Child and Adolescent Unit of the Federal Neuropsychiatric Hospital, Benin City".**

We hope that findings and conclusions will be made available to us on completion of the research.

Adole A. Amina
Admin. Officer II
for: Chairman, Ethical Committee

APPENDIX 18

HANDBILL OF KEY MESSAGES OF THE INTERVENTION

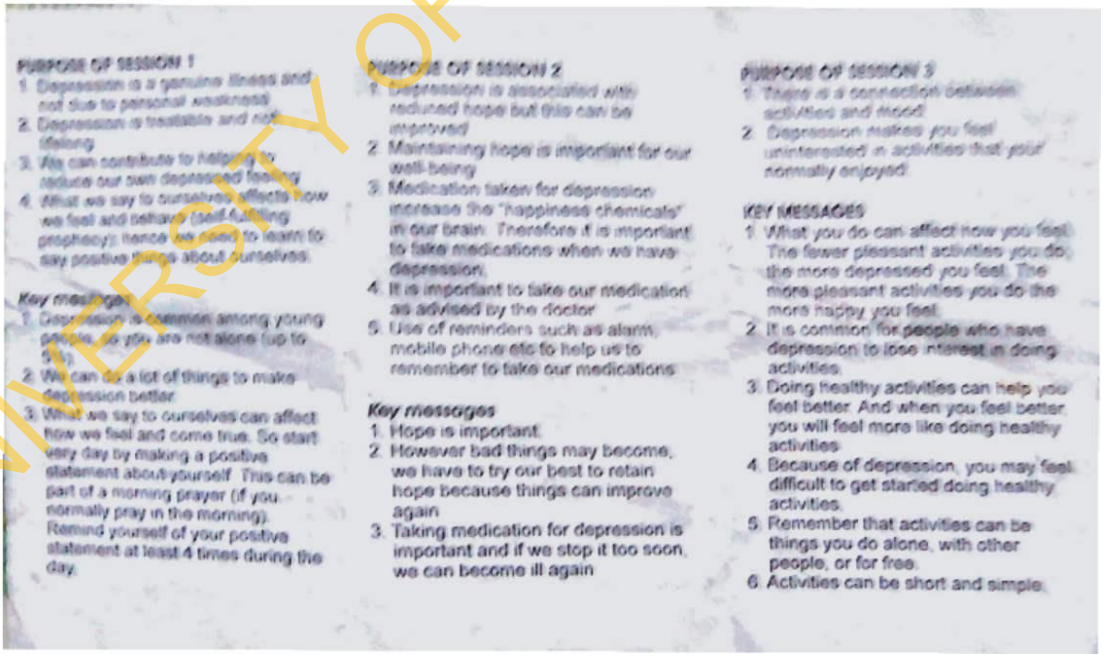


Here are some ideas of healthy activities that you could do.

- Listen to the music
- Go to prayer meeting or church
- Prayer
- Sing
- Meditate on the Bible or Quran
- Listen to birds sing
- Look at clouds and enjoy the patterns they make
- Help your parents, siblings or friend or a neighbour
- Show an interest in what others say
- Notice good things that happen around you
- Give a compliment or praise someone
- Talk about current affairs
- Make a new friend
- Watch TV, video or DVD
- Play cards
- Join a club
- Read an interesting book
- Volunteer at the church or mosque
- Help someone
- Rearrange your room or house
- Talk on the telephone to a friend
- Accept a compliment
- Read magazines
- Daydream and imagine you are in a nice place doing nice things

EXERCISES/NOTES

COGNITIVE BEHAVIOURAL THERAPY INFORMED PSYCHOEDUCATION FOR DEPRESSED ADOLESCENTS IN NIGERIA



PURPOSE OF SESSION 1

1. Depression is a genuine illness and not due to personal weakness
2. Depression is treatable and not lifelong
3. We can contribute to helping to reduce our own depressed feeling
4. What we say to ourselves affects how we feel and behave (self-fulfilling prophecy); hence we need to learn to say positive things about ourselves

Key messages

1. Depression is common among young people, so you are not alone (up to 5%)
2. We can do a lot of things to make depression better
3. What we say to ourselves can affect how we feel and come true. So start every day by making a positive statement about yourself. This can be part of a morning prayer (if you normally pray in the morning). Remind yourself of your positive statement at least 4 times during the day.

PURPOSE OF SESSION 2

1. Depression is associated with reduced hope but this can be improved
2. Maintaining hope is important for our well-being
3. Medication taken for depression increase the "happiness chemicals" in our brain. Therefore it is important to take medications when we have depression.
4. It is important to take our medication as advised by the doctor
5. Use of reminders such as alarm, mobile phone etc to help us to remember to take our medications

Key messages

1. Hope is important.
2. However bad things may become, we have to try our best to retain hope because things can improve again.
3. Taking medication for depression is important and if we stop it too soon, we can become ill again.

PURPOSE OF SESSION 3

1. There is a connection between activities and mood.
2. Depression makes you feel uninterested in activities that you normally enjoyed.

KEY MESSAGES

1. What you do can affect how you feel. The fewer pleasant activities you do, the more depressed you feel. The more pleasant activities you do the more happy you feel.
2. It is common for people who have depression to lose interest in doing activities.
3. Doing healthy activities can help you feel better. And when you feel better, you will feel more like doing healthy activities.
4. Because of depression, you may feel difficult to get started doing healthy activities.
5. Remember that activities can be things you do alone, with other people, or for free.
6. Activities can be short and simple.

APPENDIX 19

TREATMENT MANUAL

Cognitive Behavioural Therapy Informed Psychoeducation intervention for depressed adolescents in Nigeria

Treatment Manual

By

Dr Cornelius Ani

This is a manual for the delivery of a four-session psychoeducation intervention for depression that includes cognitive behavioural therapy strategies. It draws on previous work and manuals ofother Cognitive-Behavioural or Hope Interventions for the treatment of depression such as Bella Awusah et al 2015,Muñoz, Ghosh Ippen, Rao, Le, and Dwyer (2006), and TIDY Group at Imperial College, and Mutcher 2002.

The main aim of this intervention is to decrease depressive symptoms, improve hope and medication adherence. The manual has been adapted bearing the circumstances of Nigerian adolescents as follows:

(1) Group format was chosen as limited resources in developing countries like Nigeria make this format more accessible to more young people.
(2) The number of sessions was limited to 3 intervention sessions and one revision session (total 4 sessions) as more frequent sessions are unlikely to be affordable in a low income country like Nigeria.
(3) Behavioural interventions were given more prominence over cognitive interventions because the former is relatively less complicated and time efficient compared with cognitive interventions (Cuijpers et al 2006)
(4) The language and examples were simplified and adapted to Nigerian adolescents. It was further translated to the local Pidgin English.
(5) Due to a high prevalence of religious coping, religious components were incorporated as appropriate.
(6) No written assignments were given. Instead, personal “practice” activities were given

BACKGROUND

Psychoeducation alone has been shown to be effective in reducing depressive symptoms. CBT also has good evidence base for reducing depressive symptoms. This study aims to maximise the synergy between these two independently effective interventions.

Most studies of psychological interventions in depression have been conducted in developed countries and based on cognitive and behavioural interventions.Recently, CBT interventions for young people have been found effective for depression in Nigeria among moderately depressed school children (Bella Awusah et al 2015). This study extends the evaluation of psychosocial treatments for depression by focusing

on a clinical sample and use of a shorter treatment package that primarily emphasises psychoeducationas the main component.

A number of “dismantling” studies have examined disaggregated interventions in depression. Donker et al (2009) found that psychoeducation alone can reduce depressive symptoms. Cuijpers et al (2006) showed in a meta-analysis that behavioural interventions alone can be effective in managing depressive disorder.

The current study focuses more on psychoeducation, which constitutes mostof 2 of the 3 intervention sessions(session 1 and 2). The focus on psychoeducation is based on the understanding that if found effective, this type of intervention may be easier for less skilled health-care workers to deliver in LAMICs like Nigeria compared with more complex CBT interventions.

Therapy sessions in this programme are divided into four sessions. The first session offers an understanding of depression and use of simple cognitive techniques to improve coping. The second focuses on improving hope and adherence to medication, and thethirdsessiondiscusseshow changing daily activities can be used to improve mood.The fourth session reviews and reinforces the key messages from the preceding sessions.

RATIONALE FOR CHOICE OF SESSION CONTENTS

The main goals of this programme are to produce a psychological intervention that is feasible in a low income setting. Thus the package has been deliberately designed to be brief, group-based, deliverable by a professional with non-specialist expertise in psychological intervention, with predominantly psychoeducationinterventionsthe choice of content is determined by the above considerations.

The first session focuses on psycho-education because improving the young people’sunderstanding of depression is key to de-mystifying the condition, depersonalising their suffering and giving them hope of possible recovery and their own agency in achieving this. We thought this is an important component especially as psycho-education alone has been shown to reduce depressive symptoms.

The first session also includes a simple cognitive technique “positive self talk”. A more complex cognitive intervention was not included because they are relatively sophisticated, requires high level of therapist’s expertise and a client group with ability to easily understand the concepts; hencemore difficult to deliver in LAMICs.

The second session is an extension of psychoeducation and focuses on promoting hope and medication adherence. All the patients are on antidepressants and it is well recognised that suboptimal adherence is a common cause of treatment failure in depression.

The third session focuses on activity scheduling, which is a behaviouralintervention that has been shown to be effective for depression (Cuijpers et al 2006). It is said to be less complicated which makes it attractive in settings with limited therapist expertise and with clients that may find cognitive interventions difficult. These considerations justify the inclusion of this behavioural intervention in this programme.

Session four is devoted to revisiting the previous sessions.

A description of each session is provided later.

Instructions for therapists
Please this manual as a guide. It presents the key areas you should focus on during sessions. It also provides examples that will serve as guides when the adolescents do not provide material to work with in session. However, do work with examples or difficulties the adolescents bring to the sessions as these would be relevant to their particular circumstances. Please familiarise yourself with the manual until you feel comfortable and confident before using it in sessions.

The sessions are usually 60-90 minutes long. Try and adhere to these times to avoid the session over-running or having to miss out sections. At the end of each session, the adolescents are given a "practice" which they should be encouraged to practice before the next session. These "practices" are essential as they help the adolescents translate what they learnt in each session into practice.

Start the first session with an introduction of yourself and each group member and set ground rules for the sessions.

INTRODUCTION

Introduce yourself and ask each group member to introduce themselves with first name only. Make the introduction non-threatening by avoiding people having to say things they may be embarrassed about. It may be sufficient for them to simply say their name.

Time = 5 minutes

GROUND RULES FOR THERAPY SESSIONS

Time = 5 minutes

1. Please be punctual by arriving on time.
2. Come every week. Each session is different and builds on the previous week. It is therefore essential for every session to be attended in order to gain the full benefit of the programme.
4. Do the "practice". You will find the sessions more helpful by practising what you learn in these sessions.
5. What you talk about in session is **confidential**. However, it's ok if you want to share what you have learnt with other people if you want but don't mention the names of other group members of anything they said in the sessions.
6. Try to be as honest as possible, and express yourself just as you are and how you feel.
7. Turn off your mobile phone or put it on "vibrate" once you come into the therapy so it doesn't interrupt the session.

Ask the group members to add more rules if they wish.

SESSION ONE

Psycho-education and positive self talk

INTRODUCTION TO PSYCHO-EDUCATION

Young people who are depressed are often confused about what is happening to them. They may not be aware that depression is common and may feel alone in their condition. Affected young people may not be able to understand thattheir mood can improve and what they can do to help such improvement. They may not be able to express their feeling to others and may become socially withdrawn and reduce participation in pleasant activities. Providing explanation to help young people have a realistic understanding of these factors may lead to a sense of relief and promote hope.

INTRODUCTION TO POSITIVE SELF TALK

What we say to (or about) ourselves is like a window that shows how we think about ourselves. Incidentally, how we think about ourselves affects how we feel. For example, if we think negatively, we feel sad and anxious. Young people who are depressed often make negative comments about themselves e.g. “I am useless”. If we say negative things about ourselves often, we may start believing the negative statements and start behaving in a way to make the negative statement to come true (self fulfilling prophecy). Fortunately, the opposite is also true, that is, if we say positive things about ourselves, we can make ourselves feel more positive and behave more positively.

PURPOSE OF SESSION 1

1. Learn that depression is a genuine illness and not due to personal weakness
2. Learn that depression is treatable and not lifelong
3. Learn that we can contribute to helping to reduce our own depressed feeling
4. Learn that what we say to ourselves affectshow we feel and behave (self fulfilling prophecy); hence we need to learn to say positive things about ourselves.

Say: *They have been selected because they were identified as being low and down in mood “depressed”. That young people who feel depressed may experience feeling down, being moody and irritable, easily upset and tearful, difficulty sleeping, change in behaviour like not enjoying things they enjoyed before including being with friends, and find it difficult to keep up with house work, school work, and friends sometimes because they feel very tired..*

Ask *group members to identify which symptoms of depression mentioned above they have experienced in the course of their illness. This would help group members realise their symptoms are not uniqueto them.*

Say: *depression is linked with stresses such as relationship difficulties, bullying, exam stress, lack of money although some young people affected may be unaware of or easily identify what may be causing them to feel depressed.*

Say: *Depression is common among young people – it affects up to 5% (1 in 20) – so the group members are not the only persons affected (they happen to be those identified and who would get help from the programme).*

Say: *depression is a very difficult and unpleasant experience but there is* ***a lot that can be done to help make it better.****This programme is designed to show them how to make it better. Say that however bad the young people feel, they can get better and it will not last forever.*

Say: *Contrary to what some people may say or believe, depression is not caused by evil spirits, witches and wizards. Also depression is not a punishment by God or Allah for doing something bad. It is like any other illness that just happens and affects both people that are good and those not so good, and both the both rich and poor people. No one is so strong or so good that they may not be affected by depression. It is not only poor people are affected by depression*

Depression is more likely to happen to someone if another family member is already affected but it does not meant we have to blame our family or ourselves.

A change in behaviour can be a sign of depression

Excessive drinking of alcohol can make depression worse

Depression can occur when something bad happens to someone (like failing an exam)

Someone affected by depression may stop doing things they used to enjoy doing before

Say: *what we say comes from what we think (our mouth is the window into our mind). So if we say negative things about our self, we are likely to experience negative feelings, and have negative experiences. The good news is that the opposite is also true – if we say positive things and reject negative comments, we feel more positive and behave positively. Encourage each person to make a "positive confession" about themselves and say how it makes them feel. Ensure each participant makes at least one positive comment about themselves. Encourage them to choose a positive comment that they see as factual or realistic or faith-based. This may include religious beliefs e.g. "I am a child of God, good things will come to me". Use local and religious positive comments "e.g. however dark the night may be, the day eventually follows or the sun eventually rises", "as long as there is life, there is hope" etct*

Say: *Imagine positive comments a good friend may say to you. You can say similar things to yourself (pretend to be a good friend to yourself).*

Say – *some people call this "counting their blessings". Explain that however difficult things are, if we look closely in ALL other aspects of our life, there would be some positives we can take (even if it is that we are alive, or able to attend school, or have sunshine etc)*

ENDING SESSION 1
KEY MESSAGES FROM SESSION 1

1. Read the key messages aloud and check every group member understands them.

2. Ask the group if they have any questions or comments.

3. Ask the group which of the techniques learnt today might be most useful to them.

Key messages

1. Depression is common, so you are not alone.
2. We can do a lot of things to make depression better. This programme will help them know how to make depression better.
3. What we say to ourselves can affect how we feel and come true. So start very day by making a positive statement about yourself. This can be part of a morning prayer (if you normally pray in the morning). Remind yourself of your positive statement at least 4 times during the day.

PRACTICE

Say: *I would like to talk about the importance of practicing the skills you learn in the group. Some of you may be thinking: "what do you mean by practice?" Practice means doing brief activities on your own outside of the group.*
You can think of the skills you learn here as tools to use in your everyday life to improve your mood. By trying out your new skills at home while you are still coming here, you can report back to the group and let us know what worked for you and what didn't work. Then we can come up with ways to make them work better.

This treatment will be successful for you if you learn skills for managing your mood and you feel confident using these skills in your daily life. You will need to practice because if you don't practice the skills, you won't learn them.
Each session's practice will consist of one or more projects that everybody in the group will do.

Practice for Session 1

Make a new positive statement about yourself everyday in the morning and repeat this to yourself 4 times during the day.

SESSION TWO

Psycho-education continued with focus on improving hope and medication adherence

INTRODUCTION TO HOPE

Hopelessness is a feature of depression. People that are hopeless may be less likely to engage in activities to improve their depressive symptoms including taking prescribed medication. Hopelessness is also a risk factor for suicide.

INTRODUCTION TO MEDICATION ADHERENCE

Antidepressants have good evidence base for reducing depressive symptoms. However, their efficacy depends to a large extent on adequate adherence. Adequate medical treatment of depression requires extended use of antidepressants for 6 months or longer from remission in order to reduce the risk of relapse. Thus depression can be seen as a long term condition. Research suggests that medication adherence is a challenge for many people with long term conditions and contributes to poorer outcomes.

PURPOSE OF SESSION 1

1. Learn that depression is associated with reduced hope but this can be improved
2. Learn that maintaining hope is important for our wellbeing
3. Learn ways to improve and maintain our hope
4. Learn more about the medication we are taking for depression including how they work
5. Learn why it is important to take the medication how doctor has advised us
6. Learn ways to help us to remember to take our medications

Say: *Higher hope is related to better life outcomes. Patients with higher hopes are more likely to adhere to therapeuticintervention.*

When clients believe in a positive future for themselves they aremore likely to take action toward recovery, which helps to improve their situation.

Everyone can sometimes lose hope for a short period but the important thing is to try and regain one's hope as soon as possible.

Remember however dark the night is the sun will rise eventually (get them to identify more proverbs like this and share)

Even in situations where everyone is stressed, hopeful people continue to do better

Ask the patients"What has maintained your hope during this period when you have been depressed? Allow patients to share their answers to this question and

encourage everyone to take something new from what has helped others to maintain their hope.

Remind them how powerful self-talk can be. For example, statements such as, "I am going to getbetter," versus "I am getting worse," can result in dramatically different emotional responses

Explain that spiritual faith can help to foster hope by providing a sense of meaning forsuffering that is beyond human explanation.

Ask them these questions from what they now know, "What does a hopeful person look like and sound like? Find an example of someone in history who behaved in a more hopeful manner (e.g. Nelson Mandela, Barack Obama)? What could you say to yourself every morning to improve your hope? What would a hopeful person do in circumstances like yours?Name an activity, event, or person that tends to increase/decrease your hope.

If you wanted to increase your hope in the next few days, what could you do?

What changes in your actions would send a message to people that you hadbecome more hopeful?What can you do to help yourself remember hope?

Look for example of things that seemed impossible but became possible.

Medication adherence

Say - explain that when we are depressed, the amount of "happiness chemicals" in ourbrain becomes small. Use the analogy of a car and engine oil. When the engine oil runs out, the car "knocks engine". So we add more engine oil to make the car to start working properly again. For reasons we don't know, when some people are stressed, the "happiness chemical" in their brain becomes reducedand they start feeling sad and depressed. One way to increase the happiness chemicals is by taking medication for depression. Explain there are different types of medications for depression but they all do the same thing which is to increase the "happiness chemicals" in our brain.Use adiagram to explain in a basic manner how neural transmission works and how antidepressants boost serotonin and noradrenaline. Ask everyone to state the name of the medication they take and use it to illustrate that there are different types but they all do the same thing.

Say medications for depression are good at making people that are depressed feel better. However, they can only work if the person takes it as advised by the doctor

Say: If depressed patients feel well, they should continue taking their medication to prevent the "happiness chemical" from reducing which may make them become unwell again. Remind them that if car "knocksengine" due to lack of engine oil, the driver must remember to continue to top up the oil in future to prevent the car engineknockingagain

Emphasise that depressed patients will become more unwell if they stop taking their medications

Explain that medications can sometimes cause side effects – and invite them to discuss any side effects they may be having but remind them that in general their medications is likely to benefit them more than any problem it may cause

Discuss any strategies they already use for reminding themselves to take their medications. Suggest other strategies like asking family members to remind them or programming an alert on their mobile phones.

Acknowledge that lack of money may contribute to someone not taking their medicationsbut discuss ways of prioritising budgeting for their medication or charities and other organisations that could help them with the cost of their medications.

ENDING SESSION 2

KEY MESSAGES FROM SESSION 2

1. Read the key messages aloud and check every group member understands them.

2. Ask the group if they have any questions or comments.

3. Ask the group which of the techniques learnt today might be most useful to them.

Key messages

1. Hope is important.
2. However bad things may become, we have to try our best to retain hope because thing can improve again
3. Taking medication for depression is important and if we stop it too soon, we can become ill again

PRACTICE

Practice for Session 1

Make one new positive statement about yourself every day to improve your hope

Use an alert on your phone to remind you to take your medications or ask a family member to remind you to take your medications.

ACTIVITY SCHEDULING (Session 3)

Session 3 allows the participants to understand that the fewer pleasant activities people do, the more depressed they feel. The fewer things they do, the more depressed they feel. Also the more depressed they feel, the fewer things they do. This is called a "VICIOUS CYCLE." To break the vicious cycle, participants can increase those activities that make them feel better. These activities can be called "pleasant", "encouraging", "inspiring", etc. We call them "pleasant". Participants therefore associate undertaking pleasant activities with improvement in depressive symptoms. Presence of depression can limit participation in pleasant activities, which in turn, increases depressive symptoms. During these sessions, pleasant activities are defined and participants are encouraged to identify strategies for engaging in them.

SESSION THREE

Understanding how activities affect our mood and why depression stops us doing what we used to enjoy

PURPOSE OF SESSION 3

• Understand the connection between activities and mood.

• Understand why you are not doing the activities you used to enjoy.

• Identify activities you enjoyed in the past.

• Choose one activity that you can still do.

• Find a way to do activities even when you don't feel like it.

• Get some ideas for activities you might like to do.

• Make a commitment to doing a new activity

The connection between activities and your mood
Help group members understand that doing activities can help them feel better.

Say*: That what you do affects the way you feel. When you are active and do things that are healthy for you, your mood is likely to improve. Doing activities; can help you feel more positive, creates pleasant thoughts and memories that stay in your head even after the activity is over, and gives you a break from your worries.*

Say: *Pleasant and soothing activities raise our mood. Frame the statement as pleasant activities is a way to change mood, by changing "the world around you." For example:some things in life are just stressful and not very fun – like having an argument or not having money. If that is going on in your world, it's pretty likely that you'll feel irritated and bad in mood. Of course, the opposite is also true. Some activities are more fun or relaxing. For a lot of people, listening to music, talking with a friend, or praying or going to church or mosque really helps them tofeel good. Do you have any activities like this?*

Say: *In this session, we will talk about what you choose to do each day and how that can affect your mood.*

Make sure group members understand that when they are depressed, they are less likely to do healthy activities and that when they don't do healthy activities, they are more likely to be depressed.

How Does Depression Get in the Way of Doing Activities?
Help group members understand that their lack of interest in activities is a normal part of depression.

Say: *We have talked about how your mood often improves when you do activities. In a way we are suggesting that doing things is a kind of medicine. Just as you might take a multivitamin every day to help keep your body healthy, you may need to do some pleasant activities every day to keep your mood healthy. But we know that this is not easy. How does depression get in the way of doing healthy activities?*

***Write**: on the board the group's ideas about how depression gets in the way of doing*

***Ask** group members to share what they used to enjoy doing. Write their ideas on the board. Help group members name at least one activity that they used to enjoy.*

Doing Activities Even When You Don't Feel Like It

When you are depressed you often don't feel like doing activities but activities can help you feel less depressed. How can you solve this problem?

Say: start by taking small steps. Once you get started doing an activity, it is easier to keep going. What small step could you take today?

How to Get Ideas for Activities

Say: We have talked about how to get around depression and get started doing some activities. But how do you get ideas for what activities you can do?

Ask - What do other group members enjoy? What do your family, friends, or other young people enjoy doing? (Write the answers on flip chart). Stop and ask group members if that question gives them any ideas for activities they might do. Ask one group member to volunteer to share his or her idea. Discuss the rest of the points. After the group has finished suggesting activities, ask the group if they noticed their mood change just by thinking about activities that you could do?

Say: When you are trying to think of activities, it might be helpful to think about activities that you can do:
• Alone (e.g. Saying a prayer, Singing a song or hymn, Visiting a friend, Listening to music
Reading a book, Doing something good for another person, participating in religious, social, or community activities
• With other people
• For free, quickly and simply

Say: It is good to have activities you can do alone because:
You can control when you do them and you are not dependent on anyone else.

Say: It is also good to have activities you can do with other people because Pleasant contacts with people often make us feel better.

Go through the activities in Appendix 1 (attached) and allow time for group members to add their own ideas of positive activities and share these.
Say: Hopefully, you are getting some ideas about activities that you used to enjoy or activities that are new to you that you would like to try.
Ask the group to make a commitment to do one of the activities before the group meets again.

ENDING SESSION 3

1. Say: *Today we've talked about the relationship between your mood and the activities you do. Remember that when you do an activity, you also create memories and healthy thoughts. You can improve your mood by doing healthy activities.*
2. Read the key messages aloud.
3. Ask group members if they have any questions or comments
Say: Congratulations! You have completed the three sessions. You are working hard to get over your depression, and you can feel better. We have one more session to go.

KEY MESSAGES
1. What you do can affect how you feel.
2. It is common for people who have depression to lose interest in doing activities.
3. Doing healthy activities can help you feel better. And when you feel better, you will feel more like doing healthy activities
4. Because of depression, it may feel difficult to get started doing healthy activities.
5. Remember that activities can be things you do alone, with other people, or for free.
6. Activities can be short and simple.

PRACTICE
Do an Activity That You Used to Enjoy
Remind group members that each of them thought of at least one activity that they used to enjoy. Their practice includes actually *doing* the activity.
Do one or more NEW activities before the next session. Remember they can be activities:
You do alone
You do with other people
That are free or low cost
That are quick and simple

Hint: You don't have to feel like doing something to start doing it. Do an activity anyway.
Remind group members that they made a commitment to doing a new healthy activity
Say*We encourage you to do these projects, even though you may not feel like it. They are an important part of the treatment process. You are here for only a short time, and eventually you will have completed the entire program. Once you have completed the group therapy, the skills you have learned will help you keep your mood healthy. Therefore, it is important that you try them out until you feel confident that you can use them on your own.*

When you do one activity, you often start a chain--one activity could lead to another activity, other thoughts, other feelings, and contacts with other people. In general, more helpful activities lead to more helpful thoughts and feelings. So it is important to keep in mind that you have some choice in the thoughts and activities you engage in.

Activities are linked to mood. When you feel down, it may be hard to find the energy to do healthy activities. But when you do activities you are more likely to:

- Feel happier and healthier.

- Have positive thoughts about yourself and your life.

- Have healthy contact with other people.

SESSION FOUR

Review

Review the key messages from each session and check that everyone has been able to continue to do the PRACTICE topics for each week.

Do a formal ending and good byes

APPENDIX

Here are some ideas of healthy activities that you could do.

Listen to the music

Go to prayer meeting or church

Prayer

Sing

Meditate on the Bible or Quran

Listen to birds sing

Look at clouds and enjoy the patterns they make

Help your parents, siblings or friend or a neighbour

Show an interest in what others say

Notice good things that happen around you

Give a compliment or praise someone

Talk about current affairs

Make a new friend

Watch TV, video or DVD

Play cards

Join a club

Read an interesting book

Volunteer at the church or mosque

Help someone

Rearrange your room or house

Talk on the telephone to a friend

Accept a compliment

Read magazines,

Daydream and imagine you are in a nice place doing nice things

THE ACTIVITIES DO NOT HAVE TO BE SPECIAL (ALTHOUGH THEY CAN BE).